BTL-08

Mx and Sx

ECG Series

SERVICE'S MANUAL

V100z1IE09/07/2007EN

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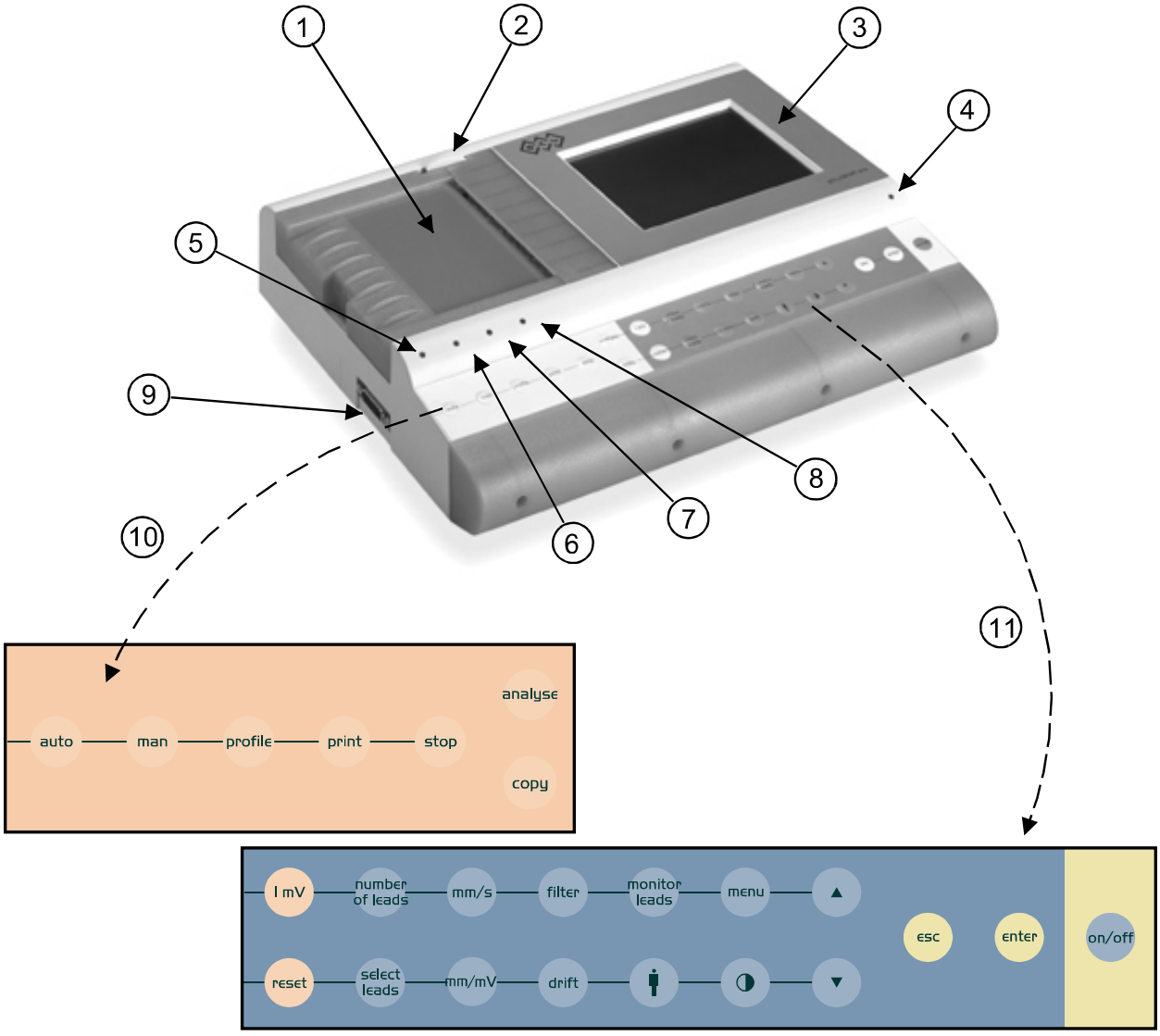
1 INSTRUCTIONS FOR USE

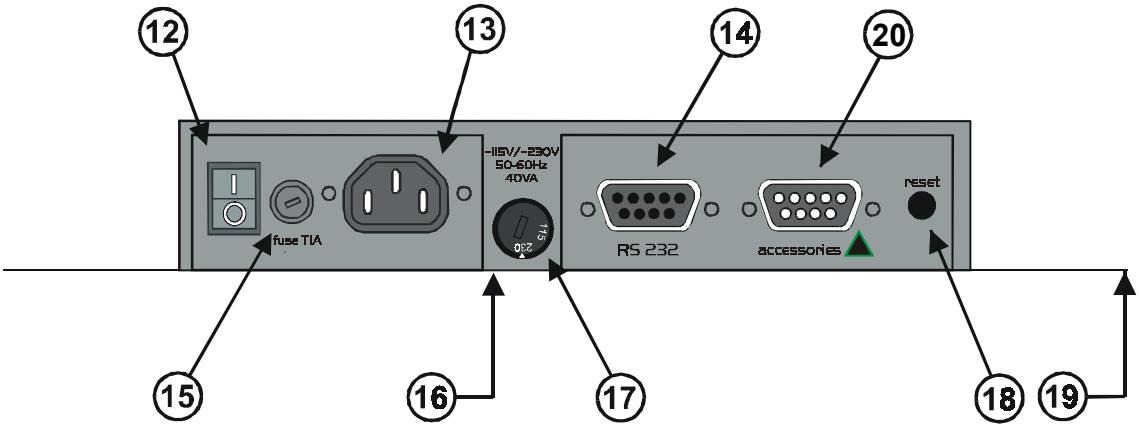
1.1 OUTWARD APPEARANCE

1.1.1 Top View



1. printer cover
2. locking lever for printer head (models MD3, MD, MT) / lever to open printer (models S1, S3, SD)
3. display / control lights (models S1, S3)
4. control light indicating ON status and charging
5. **automat** profile control light
6. **manual** profile control light
7. **profile** profile control light
8. control light indicating printer operation and print errors
9. patient cable connector
10. keyboard to control printer
11. keyboard to set record parameters

1.1.2 Rear View



12. mains switch – positions **0** / **I**
13. mains plug
14. PC port
15. mains fuse
16. manufacture and type label (on the bottom)
17. mains voltage switch
18. RESET button to restart the equipment if the unit does not react to any commands
19. grounding screw (on the bottom)
20. accessory port (models MD3, MD, MT)

1.2 ASSEMBLY AND PUTTING INTO OPERATION

Inspect the box for damage and report any damage to carrier and distributor. Do not proceed with installation and assembly if box is damaged.

Unpack the equipment and place it on a stable horizontal surface suitable for the equipment's weight. Always position the unit out of direct sunlight. Always position the unit away from direct heat sources such as radiator or room heater. Cooling of the equipment is provided for by forced air circulation. Cooling vents are located at the bottom of the equipment and around printer and must not be covered. Do not position the equipment on a soft surface which may obstruct air flow to the bottom cooling vents. Do not put any heat-producing devices or objects containing water or other liquid on the equipment. Do not place the equipment close to devices producing strong electromagnetic, electric or magnetic field (diathermy, X-rays, etc.), as this could affect equipment electronics.

Retain the original packaging to ensure maximum protection of the device during transportation.

PLUG THE DEVICE DIRECTLY IN THE MAINS SOCKET. DO NOT USE ANY MULTI-CONNECTION EXTENSION CABLE OR ADAPTER.

Checking correct mains voltage:
Before first connection of the equipment to the mains check if the mains voltage switch (**17**) located on the rear panel is in the position corresponding to the local voltage standards, either in the "230V" or "115V" position.

Switching the device on:
Plug the power supply into the mains socket and switch the **O**/ **I** rocker switch (**12**) on the rear panel to the "**I**" position. Press the **on/off** switch on the top panel. The ON status is indicated by the control light **(4)**.
The mains switch (**12**) should always be in the "**I**" position so that the accumulators can be recharged.

1.3 OVERVIEW OF FUNCTIONS OF KEYBOARD BUTTONS

The following is an overview of available buttons on all models; some of the buttons may not be available on your model.

1.3.1 auto

Press the **print** button in the **auto** mode to record and print ECG curve from 12 leads including analysis and verbal interpretation (comes as option). For print options, use the **number of leads** and **select leads** buttons. Print parameters can be modified during printing. Press the **stop** button to stop printing. The unit's internal memory stores 10-sec signals for later print, analysis and saving – use the **copy**, **analyse**, **patient**, **menu** buttons. The use of **auto** mode is indicated by the pilot light (**5**).

1.3.2 man

Record ECG curve from 12 leads manually. For print options, use the **number of leads** and **select leads** buttons. Print parameters can be modified during printing. Press the **print** button to start printing, press the **stop** button to stop printing The unit's internal memory stores 10-sec signals for later print, analysis and saving – use the **copy**, **analyse**, **patient**, **menu** buttons. The use of **man** mode is indicated by the pilot light (**6**).

1.3.3 profile

Select an active profile (edited in **profile settings**) to record ECG curve according to the user preset settings saved in the unit's memory. Print parameters can be modified during printing. Press the **print** button to start printing, press the **stop** button to stop printing The unit's internal memory stores 10-sec signals for later print, analysis and saving – use the **copy**, **analyse**, **patient**, **menu** buttons. The use of **profile** mode is indicated by the pilot light (**7**).
print

1.3.4 print

To print record in the selected profile.

1.3.5 stop

To stop print.

1.3.6 analyse

To print verbal interpretation and analysis of the last record (only active with the optional DIAGNOSTICS module).

1.3.7 copy

To reprint last record.

1.3.8 1mV

To print calibration signal of the 1mV amplitude.

1.3.9 restart

To restart ECG inputs and ECG internal amplifiers. Use this function in case of inadequate quality of ECG signals or if the ECG curves are out of the display.

1.3.10 number of leads

To select number of leads for print.

1.3.11 select leads

To select groups of leads for print. The selected leads are displayed.

1.3.12 mm/s

To set paper speed.

1.3.13 mm/mV

To set print sensitivity.

1.3.14 filter

To set adaptable mains filter, muscle tremors or artefact filter and their combinations.

1.3.15 drift

To switch between baseline filters (Anti Drift System).

1.3.16 monitor leads

To switch between leads monitored on the display.

1.3.17 patient

To enter data of a new patient. Press **enter** to save. The data is printed and saved with record. The data can be recalled from the database (in the menu), viewed (MT model only) or printed.

1.3.18 menu

To activate menu on the display (unit setup, patient data management, etc.)

1.3.19 contrast

To set display contrast.

1.3.20 esc

To cancel selection and / or return to previous window (data is not saved).

1.3.21 enter

To confirm selection and save data or continue to next window.

1.4 CHECKING LOOSE LEADS

If an electrode is not properly attached to the skin, the control light of the selected profile starts blinking (**5**), (**6**) or (**7**) (models S1, S3) or the marks on the screen LRFN, V1, V2, V3, V4, V5, V6 are displayed inversely (models SD, MD3, MD, MT). Check the electrodes and press **restart.** Record the ECG signal only after the error messages stop. Recording the ECG curve despite the error messages can bring distorted signal.

1.5 PRINTER

The printer prints on thermo-sensitive paper. Paper quality may considerably affect quality of printouts. Use only good quality paper.

The yellow pilot light (**8**) indicates printer error status. Possible causes:

- printer is out of paper
- bad pressure of the head on the paper (in the MD3, MD and MT models: the printer head locking lever (**2**) is in the position "unlocked"; shift the lever to the left to lock the head and make it ready for print).

In addition, the SD, MD3, MD, MT models display: "**Pressure!"** and/or "**Paper!**".

Inserting paper (models S1, S3, SD): Press the button (**2**) to open the printer cover (**1**). Insert the paper roll. The thermo-sensitive layer should face the printer head. Close the cover. The control light indicating printer operation and print errors (**8**) stops lighting.

Inserting paper (models MD3, MD, MT): Open the printer cover (**1**), shift the locking lever (**2**) to the right and insert the paper roll. Put the end of the paper under the roller. The roller automatically starts to roll the paper on. Close the cover and turn the locking lever back to the left.

1.6 ACCUMULATOR

See section **6 Technical Parameters**. for details on the accumulator type. Have the accumulator replaced by authorized service personnel only.

The accumulator is continuously recharged from the mains. The accumulator is recharged even when the unit is switched off, provided it is connected to the mains and the mains switch (**12**) is in **I** position. It takes about 6 - 10 hours to fully recharge the accumulator (recommended overnight). If the accumulator is not charged the recorded ECG curve will likely be not printed. Save the record and print it after at least a partial accumulator recharge (about one hour).

An audio tone (short intermittent beeping - can be switched off) signals discharged accumulator. On models with displays, the "**battery**" warning message appears on the screen.

The status and operation of the equipment is also indicated by the pilot light (**4**).

- equipment is on, accumulator is charged:.....pilot light illuminate yellow
- equipment is on, operating from accumulator: .....pilot light illuminate green
- equipment is off, accumulator is charged: .....pilot light illuminate yellow
- equipment is off, accumulator fully charged: .....pilot light is off

If the discharge status is signalled it is likely that the full ECG record will not be printed. However, the data is still saved in the memory.
It is recommended that the accumulator is kept permanently charged. Whenever possible, plug the ECG to the mains and switch the mains switch (**12**) to the **I** position.

1.7 LITHIUM BATTERY

See section **6 Technical Parameters** for details on battery type. Have the battery replaced by authorized service personnel only.

2 EXAMINATION

2.1 "ON-LINE" MODE

This mode is automatically selected after the unit's switch-on. In this mode, the screen displays the recorded ECG signal and other information:

- selected print profile (auto, manual, profile, long)
- heart rate
- paper speed
- sensitivity
- set filters
- loose leads, if any
- name of displayed lead (only when changed – press the **monitor leads** button)
- number and names of the leads to be printed (MT model); The SD, MD, MD3 models display this information only when it is set (pressing the **number of leads** and/or **select leads** buttons).
- ECG curve
- error messages: **battery** (discharged battery), **paper** (no paper), **pressure** (printer head unlocked)
- when the 10-second record is saved into the memory the equipment displays **saving** (or **measuring** in some software versions) on the screen

The S1 and S3 models indicate all information by pilot lights on the top panel.

2.2 SELECTING A PROFILE

The 'profiles' are pre-set recording and printing parameters for easy and fast recording and print. Their factory preset parameters can be changed in the menu. In addition to the profiles **automat** (the **auto** button) and **manual** (the **man** button) the user can define a number of other profiles (press the **profile** button repeatedly to see all profiles).
The preset profile parameters can be changed at any time before and during recording. Press the respective buttons.
Press the **print** button to start recording. The recording terminates automatically after the preset time elapses or manually if the **stop** button is pressed.

2.3 FIXING THE ELECTRODES

The quality of record is also dependant on the contact between the electrode and the patient's skin. For best contact:

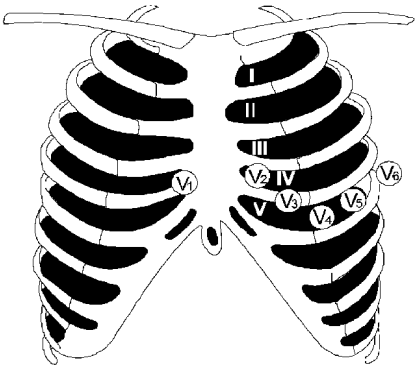
- make sure the skin is warm and patient relaxed
- rub the skin with alcohol before fixing the electrodes
- use enough ECG gel on the electrode

Recommended order to fix the electrodes:

- first fix the **N** electrode to the right leg
- then fix the other limb electrodes **R**, **L**, **F**
- finally fix the chest electrodes in this order: **V4 – V2 – V1 – V3 – V6 – V5**

The following is a detailed description of the placement of electrodes.

2.3.1 Limb Electrodes



R – red - right arm
L – yellow - left arm
F – green - left leg
N – black - right leg

2.3.2 Chest Electrodes

V1 – red - 4th intercostal to the right of sternum
V2 – yellow - 4th intercostal space to the left of sternum
V3 – green - between V2 and V4
V4 – brown - 5th intercostal in MDCL line
V5 – black - at height of V4 in the front axillary line, evenly between V4 and V6
V6 – violet - at height of V4 in the middle axillary line

2.4 EXAMINATION PROCESS

- Switch the unit on by the **on/off** button:

- Enter the name of the patient to be printed in the record (if desired) : (optional)
- Select print profile – e.g. **auto**:

- Fix the electrodes. Make sure that all leads are correctly connected and that ECG does not report any loose leads. Check the signal on the display.
- Press **print**:

2.4.1 Examination in the Automat Profile

SWITCH ON *the unit –* ***FIX ELECTRODES*** *–* ***SELECT PROFILE*** *by* ***auto*** *button (unit setup) –* ***START RECORDING*** *by* ***print*** *button –* ***AUTOMATIC TERMINATION***

Before and during recording, you can change the following parameters :

- printed ECG leads, format of leads (1x12, 2x6, 3x4...)
- paper speed
- sensitivity
- active filters (muscular, ADS and mains filter)

The examination will stop automatically after the preset time; or press the **stop** button to terminate the examination at any time.

If the diagnosis and analysis has not been preset for print, you can still print it - press **analyse** (only with DIAGNOSTICS module).

To reprint the record, set the print options using the keyboard and press **copy**.

For automatic recording of another patient, press **print**.

2.4.2 Examination in the Manual Profile

***SWITCH ON** the unit – **FIX ELECTRODES** – **SELECT PROFILE** by **man** button (unit setup) – **START RECORDING** by **print** button – **STOP** recording by **stop** button*

Before recording, set the following parameters (or change them during recording):

- paper speed - **mm/s** button
- sensitivity - **mm/mV** button
- number of leads - **number of leads** button
- leads to be printed - **select leads** button
- filters - **filter** and **drift** buttons

Press **print** to start.

Press **stop** to stop recording. The last 10-sec strip has been saved in the memory.

Press **analyse** to print interpretation and analysis (only with DIAGNOSTICS module).

To reprint the last 10 sec record, set the print options and press **copy**.

For automatic recording of another patient, press **print**.

2.4.3 Examination in User Profiles

***SWITCH ON** the unit – **FIX ELECTRODES** – **SELECT PROFILE** by **profile** button (unit setup) – **START RECORDING** by **print** button – **AUTOMATIC TERMINATION** or **INTERRUPTION** by **stop** button*

Other steps are similar to those described in section **2.4.1**.

2.5 RELIABILITY OF MEASURING AND DIAGNOSTICS

The parameters analysed on the basis of an averaged heart cycle can only be considered correct if the record has not been too much distorted by the mains noise, by artefacts of myopotentials or by other noises, and provided the key points of the P-QRS-T complex have been properly identified by the unit. The parameters' accuracy can be also affected by inclusion of aberrant cycles to the averaged cycle, in case the unit incorrectly classifies them as typical for the record. The unit attempts to determine the parameters of every record automatically. Therefore you should ensure that at least three cycles typical for the record are correctly averaged and that the number of aberrant cycles does not exceed the number of non-aberrant cycles.

2.6 USE OF FILTERS

Adaptable mains filter 50 Hz-60 Hz – designed to reduce noise from the mains. Adaptable to the changes in the noise frequency. Typical for this noise is a harmonic (sinusoid) course with a period of approx. 1mm at the record speed of 50mm/sec. Does not affect any diagnostically important record parameters.

Muscle tremor filter 35 Hz – filter with 35 Hz cut-off frequency. Designed to remove muscular artefacts. Characterised by non-harmonic course with short random period. Using this filter can also partly remove disturbances from the mains. Under This filter may affect some values of the amplitudes of the QRS complex.

Muscle tremor filter 25 Hz – filter with 25 Hz cut-off frequency. Designed to remove muscular artefacts. Characterised by non-harmonic course with short random period. Using this filter can also partly remove disturbances from the mains. Limit the use of this filter to cases when muscular artefacts considerably distort the record. This filter may affect some values of the amplitudes of the QRS complex.

Anti Drift System – base-line filters – filters to remove base-line drift. Use these filters in cases when the base-line drift in the recorded examination is significant. Follow this scheme:
First use the filter with the longest time constant – ADS 3.2 sec. If the base-line drift is significant and the ECG record 'escapes' from the screen, switch the ADS filter successively to the filters with faster reaction - shorter time constant

(that is from ADS 3.2 sec towards 0.1 sec). The value ‘heart rate x time of reaction of the filter‘ should considerably exceed 10 to avoid undesirable influence on the record. The use of filters with fast reaction (small number in the filter's name – 0.1 sec) can possibly result in some distortion of the P-QRS-T intervals (in particular of the diagnostically important S-T interval).

The ADS 3.2 sec filter is a standard filter for ECG recording and it is recommended that this filer is used. Generally, it is always recommended that you try to get the best record while limiting the use of filters to a minimum.

All filters can be combined for optimum filtration.

3 SETUP MODE

3.1 MAIN MENU

This section does not apply to the S1 and S3 models (for these models, see **3.2 Setup of Models S1 and S3**).

Press the **menu** button to scroll through the following items:

- Record database
- Unit setup
- Profile setup
- Select physician
- Spirometry

3.1.1 Record Database

To open, view and print the last records. The records are stored in the memory automatically. If the memory is full, the new record overwrites the oldest record stored. The records marked as **archive** are not overwritten and remain in the memory.
Work with the record:

- reprint it
- change print profile
- view the record on the display including analysis (MT model only)
- mark it as archive
- export it to a PC (to the BTL-08 Win program)
- export it to a PC via modem and dial-up line (MT model only)
- export it to a PC via mobile phone (MT model only)

3.1.2 Unit Setup

Set the following parameters:

- time
- date
- profile to be used on opening
- max. heart rate
- acoustic signalling of the QRS complex
- thickness of print
- patient card details
- acoustic signalling of discharged battery
- sleep mode interval
- display contrast
- language
- touch-panel calibration (MT model only)
- parameters for PC or modem transmission (MT model only)

3.1.2.1 Starting Profile

Set the profile you would like to use on start.

3.1.2.2 Max. Heart Rate

Set the maximum heart rate value. If the recorded HR exceeds the settings, the unit starts to beep. Set the max. HR to zero to disable this function.

3.1.2.3 QRS Acoustic Signal

Enable or disable the acoustic signalling of the QRS complex.

3.1.2.4 Line Width

Set desired thickness of print. Refine according to the paper used.

3.1.2.5 Patient Card

Activate / deactivate the following items:

- name
- surname
- third name
- ID
- age
- sex
- weight
- blood pressure
- height
- pacemaker
- 3 user-defined items (MT model only)

3.1.2.6 Battery Status Indication

Enable/disable the acoustic signalling of discharged battery (short fast beep).

3.1.2.7 Sleep Mode Interval

Set the period of inactivity after which the equipment switches off.

3.1.2.8 Display Contrast

Set the display contrast.

3.1.2.9 Select Language

Set the language. Restart the unit for the change to appears.

3.1.2.10 Optional Patient Data

Add your own items on the patient card. Available only with the MT model.

3.1.2.11 User Setup

3.1.2.11.1 Touch Panel Calibration

Available only with the MT model.
If the buttons on the touch screen do not react when pressed, the touch screen needs calibration. Calibration values are displayed on the screen. Use the soft touch stylus to make adjustments to the sensitivity of the buttons.

Press **esc** to stop calibration. To verify touch screen adjustments, use the **'touch panel function test'** function.

3.1.2.11.2 Export to BTL-08 / Modem

Available only with the MT model.

Select direct data export to PC – via the serial line RS232 – option **connection = serial line**.

Or select data transfer via modem (by phone, mobile phone...) – option **connection = modem**. Set the control commands for your modem and your phone network. Typical setting for standard modem:

- transmission speed: according to the modem's type, typically **19 200**
- init string: **ATX3Q0V1E1S0=0**
- dial string: **ATDT*dialled_phone_number*** (i.e., for example: ATDT2724856326)
- your identification

The receiving party must have a PC with modem and running program BTL-08 ECG Modem. View and process the received data using the BTL-08 Win program.

3.1.2.11.3 Date / Time

Set the date and time to be printed in the reports.

3.1.2.11.4 Setup of Filter 50Hz / 60Hz

Set according to the mains frequency. The applied mains filter can automatically retune itself according to the mains noise frequency. This setting selects the initial frequency on which the mains noise is searched for faster filter reaction.

3.1.3 Profile Setup

Set the parameters of all print profiles: the default profiles **automat** and **manual**, other standard profiles (marked **profile**) and profiles for long recording (**long** profiles).

3.1.3.1 Setting Parameters of Profiles auto, man, normal

Set these parameters for each profile:

- profile name
- active - yes / no (will be displayed in the list of profiles)
- sensitivity
- paper speed
- length of printed and saved record
- print the record?
- printer mode (stops automatically after preset time or must be stopped manually by the **stop** button)
- print options:
    - number of leads printed above each other
    - length of printing
    - print mode: synchronous / in-time (the printed curves are either all recorded at the same time or recorded at the time of printing)
    - data to be printed in the header of the record
    - print leads averaging yes / no (only with DIAGNOSTICS module)
    - print 10 sec rhythm (only with DIAGNOSTICS module)
    - print analysis (only with DIAGNOSTICS module)
    - print verbal interpretation (only with DIAGNOSTICS module)

3.1.3.2 Setting Parameters of Profiles long

Set the following parameters:

- profile name
- active - yes / no (will be displayed in the list of profiles)
- sensitivity
- paper speed
- length of saved record
- data to be printed in the header of the record
- numbers of printed and recorded leads

3.1.4 Select Physician

Set the physician's name and facility as it will appear on the record.

3.1.5 Spirometry

Attach the spirometry module to the patient connector (**9**) on the side of the unit (instead of the patient cable).
For correct evaluation, enter patient's **age**, **height** and **sex**.

3.2 SETUP OF MODELS S1 AND S3

Setup mode is indicated by the blinking pilot lights on the top panel.

3.2.1 Line Width

To set the line thickness, press **stop** while keeping the **restart** button pressed. The number of blinking diodes indicates the set line thickness. Press the **filter** button to make changes. Press **restart** to save and exit.

3.2.2 Select Language

Press **stop** while keeping the **filter** button pressed. To change the language press **select leads**. The languages are indicated by blinking diodes:

V3 – English
V6 – Czech
III – German
avf – Polish

Press **restart** to save and exit. Restart the unit.

3.2.3 Setup of Filter 50 Hz / 60 Hz

Sett according to the mains frequency. The applied mains filter can automatically retune itself according to the mains noise frequency. This setting selects the initial frequency on which the mains noise is searched for faster filter reaction.

Press **stop** while keeping the **filter** button pressed. To change the filter press **filter**. The set filter is indicated by blinking diodes:

50Hz – the mains filter is set to 50Hz
35Hz + 50Hz – the mains filter is set to 60Hz

Press **restart** to save and exit.

3.2.4 Parameters of Profiles auto and profile

Press **stop** while keeping the **auto** (**profile**) button pressed. The setup has two modes. Press **stop** to switch between the modes.

Settings in the first mode:

- **number of leads** number of leads to be printed one above another (indicated by the diodes V1, V2, V3 – number of blinking diodes = number of leads)
- **mm/s** paper speed (the set speed is indicated by the blinking diode 5, 25 or 50mm/s)
- **mm/mV** sensitivity (the set sensitivity is indicated by the blinking diode 5, 10 or 20mm/mV)
- **filter** active filters (the active filters are indicated by the blinking diodes 35Hz, 50Hz and isoline).

Settings in the second mode:

- **number of leads** length of record – number of shining pilot lights V1, V2, V4, V5, I, II, avr, avl, 5mm/s and 25mm/s indicates the length of record in seconds
- **select leads** print of leads averaging – indication by the pilot light **5 mm/mV** (only with DIAGNOSTICS module)
- **mm/s** print of analysis – indication by the pilot light **10 mm/mV** (only with DIAGNOSTICS module)
- **mm/mV** print of verbal interpretation – indication by the pilot light **35 Hz** (only with DIAGNOSTICS module)
- **filter** print of rhythm – indication by the pilot light **50 Hz** (only with DIAGNOSTICS module).

Press **restart** to save and exit.

3.2.5 Parameters of Profile manual

Press **stop** while keeping the **man** button pressed.

Set the parameters:

- **number of leads** number of leads to be printed one above another (indicated by the diodes V1, V2, V3 – number of blinking diodes = number of leads)
- **mm/s** paper speed (the set speed is indicated by the blinking diode 5, 25 or 50 mm/s)
- **mm/mV** sensitivity (the set sensitivity is indicated by the blinking diode 5, 10 or 20 mm/mV)
- **filter** active filters (the active filters are indicated by the blinking diodes 35 Hz, 50 Hz and isoline).

Press **restart** to save and exit.

4 ACCESSORIES AND UPGRADES

4.1 ACCESSORIES

The equipment is not designed for use with other medical devices except for those stated in this manual.
The following is a list of accessories that can be supplied with the equipment, both standard and optional.

BTL accessories:

- mains cable
- limb electrodes
- chest electrodes
- self-adhesive electrodes
- thermo-sensitive paper
- touch-pen (MT type only)
- spare fuse
- BTL patient cable, type C008.108
- BTL patient cable for self-adhesive electrodes, type C008.109
- user's manual
- suction cup electrodes set
- spirometry module BTL-08 Spiro
- software BTL-08 Win
- software BTL-08 Win Ergo
- software BTL-08 ECG Modem

4.2 UPGRADES

Equip your ECG with the DIAGNOSTICS module for full interpretation and analysis. The package includes:

- **table of analysis results** (time intervals, amplitudes of segments, electrical axes calculation and pulse frequency)
- **verbal interpretation**
- **leads averaging** (average complexes with optional reference marking)
- **overview of the last 10 sec of heart rate**
- **pacemaker** performance analysis (measurement of pulses and reference marking)

5 MAINTENANCE AND SAFETY

All maintenance and repairs must be carried out by authorized personnel only. The manufacturer bears no responsibility for the results of maintenance or repairs by unauthorized persons.

Safe operation of any item of medical equipment requires close attention to detail. Please check the following on a regular basis:

Power cord and plug - check for frays and kinks. Ensure that the insulation is not damaged in any way.

Wires, cables and electrodes - check for frays, cuts or tears in the insulation. Always route electrical cords and cables away from user or patient foot traffic areas where they could increase the chance of a tripping related accident.

Check the unit before each use to determine that all controls function normally.

No part of the equipment needs to be aseptic or sterilized.

Cleaning
To keep the device clean, do not store or use it in dusty environment and do not spill any liquid on the surface. To clean, turn the equipment off and unplug the power supply. Clean the unit with a damp cloth. Do not use abrasive materials. Do not use agents containing alcohol, ammonia, benzine, thinners. We recommend that you clean the accessories that come into contact with the patient after each treatment. Use appropriate agents.

Fuse replacement
The fuse is located in the round black box (**15**) on the rear panel. Make sure the mains switch (**12**) is in the "**0**" position. Unplug the power supply from the mains and from the equipment. Turn the segment of the fuse case to the left by a fitting screwdriver or coin in the slot. Remove the fuse. Insert a new fuse of the same rating and turn the box to the right.

Switching mains voltage
Before first connection of the equipment to the mains it is necessary to check if the mains voltage switch (**17**) is in the position corresponding to the correct voltage configuration, either in the "230V" or "115V" position. To change the voltage, make sure that the mains switch (**12**) is in the **0** position. Unplug the power supply from the mains as well as the equipment. Turn the segment of the switch by a fitting screwdriver or coin in the slot in the desired direction.

Transport and Storage
We recommend keeping the original packaging of this equipment to ensure its maximum protection during transportation. Unplug the mains cable and the accessories cables. The equipment must be stored or transported as defined in section **6 Technical Parameters**.

The equipment is designed for use with defibrillator. The defibrillator must comply with the IEC 601-2-4 and IEC 601-2-25 standards. The equipment is defibrillation resistant only if the original BTL cable is used.

The examination couch for ECG recording should be placed as far as possible from any potential sources of noise (mains cables in walls, electrical appliances) to reach the best quality of ECG signal. The conductive parts of the electrodes must not touch other conductive parts of the couch or the ground.

5.1 SAFETY

ATTENTION!

Only the original BTL patient cable can be connected to the connector marked with this label to insure the defibrillation protection. The applied part is of the CF type.

The grounding screw marked with this label is connected to the equipment's frame. In case of interference, ground the unit using this screw: connect it for example to the metal frame of the couch.

ATTENTION!
This system has no user serviceable parts or assemblies. Do not remove the instrument covers under any circumstances. Call your distributor for advice about any malfunction.

The device is equipped with a protection system that prevents connection of other accessories than supplied from the manufacturer.

Safety Precautions

- Read this manual thoroughly before operating the equipment.
- All staff should be instructed by the manufacturer or the distributor in the operation, maintenance and checking of the equipment and of all safety features and protocols.
- Make sure the electrical network in your facility is in compliance with valid norms.
- Check if the voltage switch located at the bottom of the equipment is switched to the correct voltage for your facility.
- Do not use this equipment in the presence of explosive gases and flammable anesthetics.
- Using this equipment in close proximity to other equipment may cause electromagnetic interference.
- Avoid the use of liquids in the immediate vicinity of this equipment since any liquid spilled onto the cabinet may cause serious damage to internal components.
- Inspect the equipment thoroughly before each use (loose cables, broken insulation of cables, display functions, pilot lights, controls, etc.).
- If the equipment shows any deviations from a normal operating situations, discontinue use and report the fault to authorized service personnel.
- Do not dismantle the equipment under any circumstances. Removal of protective covers implies the danger of electrical injury. Replacement of the lithium battery and the lead accumulator may only be done by authorized service personnel.
- Make sure that all materials and parts that come to direct contact with patient's skin comply with your national health standards.
- The connectors for accessories as well as the other connectors must not be used for connection of anything else than they are designed for, otherwise there is a danger of electric shock injury and serious damage to the equipment!
- Make sure that, during recording, the conductive parts of electrodes, including the N electrode, and all other conductive patient applied parts do not touch ground or other conductive places in the office.
- The equipment does not use or produce any toxic substances during its operation, storage or transport.
- Exercise care when bringing the equipment from a cold environment to warm room. Do not plug it in the mains for at least 1 hour. Never expose this equipment to very warm or very cold climatic conditions.
- The time interval between switching the mains switch off and on must be at least 3 seconds.
- This equipment does not imply any danger for patients with pacemakers.
- The equipment is defibrillator resistant. Recording resumes till 10 seconds. Only the original BTL cable must be used.
- Do not touch the equipment during the defibrillation discharge.
- Discard the equipment only after the lithium battery and lead accumulator was removed. The equipment does not contain any toxic materials that would harm the environment.
- This device is not designed for online ECG monitoring during the work with high-frequency surgical devices. It must not be connected to the patient while a high-frequency surgical device is connected to the patient.

- There is a potential risk resulting from simultaneous connection of several devices to single patient. Therefore, we do not recommend the use of the equipment in connection with other devices, other then those described in this manual.
- Use the equipment and the accessories only in accordance with the manual.
- Use recommended protective means when operating the equipment.
- Keep the equipment out of the reach of children.
- Always have the unit repaired by authorized service personnel.
- Always follow your local and national electrical, safety and healthy standards when using this equipment. Call your distributor for advice.

5.2 WARRANTY

The Manufacturer of this product warrants the product to be free from defects in workmanship and material for a period of twelve months after the date of shipment from the factory. This warranty excludes any disposable items and accessories, including, but not limited to cables or leads, power cords and electrodes. The manufacturer agrees to correct such defects without charge, or at its option to replace the item with a comparable model. To register and be eligible for warranty service, you must send or fax the fully completed warranty registration form within 30 days of installation. All costs of shipment are the responsibility of the purchaser. Damage to any part such as by accident or misuse or improper installation or by use of any accessories or abrasive material not produced by the Manufacturer is not covered by this warranty. Because of varying climatic conditions, this warranty does not cover any changes in finish, including rusting, pitting, corrosion, tarnishing or peeling. Servicing performed by unauthorized persons render this warranty invalid. There is no other express warranty. The Manufacturer hereby disclaims any and all warranties, including but not limited to, those of merchantability and fitness for a particular purpose to the extent permitted by law. The duration of any implied warranty which cannot be disclaimed is limited to the time period as specified in the express warranty. The Manufacturer shall not be liable for incidental, consequential, or special damages arising out of, or in connection with product use or performance except as may be otherwise accorded by law.

This warranty may differ from the warranty terms and conditions provided by your supplier and by applicable laws in your country.

6 TECHNICAL PARAMETERS

Type:	BTL-08 S1 ECG	BTL-08 S3 ECG	BTL-08 SD ECG	BTL-08 MD3 ECG	BTL-08 MD ECG	BTL-08 MT ECG
Display:	none	none	graphic	graphic	graphic	touch screen
dimensions (mm):			70 x 36	70 x 36	70 x 36	118 x 90
resolution:			128 x 64	128 x 64	128 x 64	320 x 240
Keyboard:	functions	functions	functions characters	functions characters	functions characters	functions characters touch-panel
Indication of discharged battery:	acoustic	acoustic	acoustic, display	acoustic, display	acoustic, display	acoustic, display
Check of loose leads:	yes	yes	yes, individual leads	yes, individual leads	yes, individual leads	yes, individual leads
Paper width (mm):	58	58	58	112	112	112
Paper speed (mm/s):	5;25;50	5;25;50	5;10;25;50	5;10;25;50	5;10;25;50	5;10;25;50
Sensitivity (mm/mV):	5;10;20	5;10;20	2.5;5;10;20	2.5;5;10;20	2.5;5;10;20	2.5;5;10;20
Number of leads:	12	12	12	12	12	12
Number of channels:	1	3	6	3	6	12
Number of displayed leads:			1	1	1	3
Measured leads:	I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6					
Electrode set:	R, L, F, N, C1, C2, C3, C4, C5, C6					
Number of printed leads:						
auto mode:	1	1, 2, 3	1, 2, 3, 6	3	3, 4, 6	3, 4, 6
manual mode:	1	1, 3	1, 2, 3, 6	3	3, 4, 6, 12	3, 4, 6, 12
long mode:	no	no	1	1	1	2
Length of record:						
auto mode (seconds):	2;4;6;8;10	2;4;6;8;10	1;2;3;4;5;8;10;20		1;2;3;4;5;8;10;20	
long mode (minutes):	no	no	1.5;3;6;9	1.5;3;6;9	1.5;3;6;9	6
Record in auto mode:	in-time	in-time	synchro in-time	synchro in-time	synchro in-time	synchro in-time
Saved 10-sec. records:	-	-	5	5	5	15
Filters:						
mains filter (Hz):	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
muscular filters (Hz):	35	35	25;35	25;35	25;35	25;35
base-line filters (s)	3.2; 0.6	3.2; 0.6	3.2; 1.5; 0.6; 0.3; 0.1		3.2; 1.5; 0.6; 0.3; 0.1	
Detection of pacemaker:	no	no	yes	yes	yes	yes
Diagnostics:	optional	optional	optional	optional	optional	optional
User profiles:						
of **normal** type:	1	1	3	3	3	10
of **long** type:	no	no	3	3	3	10
Weight (max.):		2.1 kg			3.2 kg	
Dimensions (l x w x h) [mm]:		276 x 168 x 74			330 x 270 x 74	
Operating conditions:						
temperature:	+ 10 °C to + 40 °C					
relative humidity:	30 % to 75 %					
atmospheric pressure:	700 hPa to 1060 hPa					
position:	horizontal – on legs					
operation:	continuous					
Transport and storage conditions:						
temperature:	- 10 °C to + 55 °C					
relative humidity:	25 % to 85 %					
atmospheric pressure:	650 hPa to 1100 hPa					
position:	any					
max. duration of storage:	1 year					
other conditions:	transport only in the supplied packaging					

Type:	BTL-08 S1 ECG	BTL-08 S3 ECG	BTL-08 SD ECG	BTL-08 MD3 ECG	BTL-08 MD ECG	BTL-08 MT ECG
Power supply:						
input:	30 VA	30 VA	30 VA	40 VA	40 VA	40 VA
mains voltage:	~ 99 V to 126 V (115 V nominal), AC ~ 198 V to 252 V (230 V nominal), AC					
frequency:	50 Hz to 60 Hz					
protection class:	II (according to IEC 536)					
external fuse:	T1A / 250V, tube fuse 5 x 20 mm, according to IEC 127-2					
mains switch:	on the rear panel, positions 0 / I					
covering grade:	IP20					
Internal chemical sources:						
battery:	lithium battery CR2032					
lead accumulator:	1x 6 V / 1.2 Ah; 25x97x52			2x 6 V / 1.2 Ah; 25x97x52 or 1x 12 V / 1.2 Ah, 48x97x52		
accumulator capacity:	2 hours of ordinary use , approx. 15 min. of printing					
charger:	internal, time for 100 % charging approx. 6 – 10 hours					
Input impedance:	> 20 MΩ					
CMRR:	> 95 dB			> 98 dB		
Sampling frequency:	2 000 Hz					
long mode, one lead	18 000 Hz					
long mode, two leads	9 000 Hz					
Frequency range (filters off):						
for +10% / -30 %	0.05 Hz – 150 Hz					
for +10% / -10 %	0.67 Hz – 40 Hz					
Amplitude accuracy:	± 2 %					
Time accuracy:	± 2 %					
Quantization noise:	3.9 µV					
Input noise:	< 8 µV					
A/D converter resolution:	13 bit					
Max. range of input voltage:	AC: ± 15.9 mV; DC: ± 400 mV					
Applied part:	CF type					
Connection to PC:	RS232	RS232	RS232	RS232	RS232	RS232
Connection to:						
modem:	no	no	no	no	no	yes
mobile phone:	no	no	no	no	no	yes

Applicable Standards:

Name	IEC, EN, ISO, MDD
Medical electrical equipment Part 1: General requirements for safety	IEC 601-1
Amendments to IEC 601-1	A2, A11, A12
Medical electrical equipment Part 1: General requirements for safety 1.Collateral standard: Safety requirements for medical electrical systems	IEC 60601-1-1
Medical electrical equipment Part 1: General requirements for safety 2. Collateral Standard: Electromagnetic compatibility. Requirements and tests	IEC 601-1-2
Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55011
Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test - Basic EMC Publication	IEC 61000-4-2
Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio frequency, electromagnetic field immunity test	IEC 61000-4-3
Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transients/burst immunity test - Basic EMC Publication	IEC 61000-4-4
Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 5: Surge immunity test	IEC 61000-4-5
Medical electrical equipment Part 1: General requirements for safety 4.Collateral standard: Programmable electrical medical systems	IEC 601-1-4
Medical devices - Risk analysis	EN 1441
Biological evaluation of medical devices - Part 1: Evaluation and testing	ISO 10 993-1
The Medical Devices Directive 93/42/EEC	MDD 93/42/EEC
Medical electrical equipment - Part 2: Particular requirements for safety of electrocardiographs	IEC 601-2-25
Amendment to IEC 601-2-25	A1

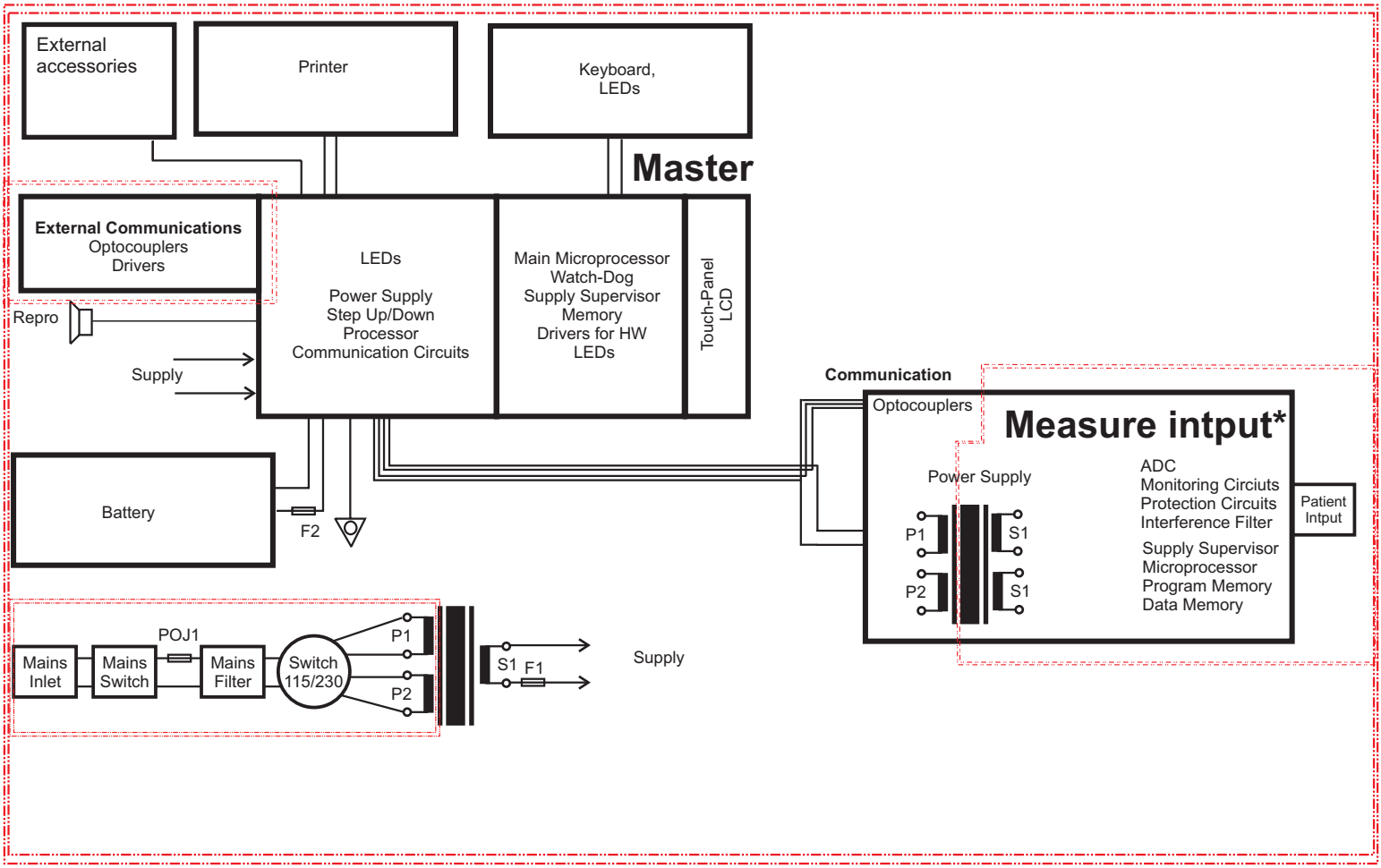
TROUBLE - SHOOTING

Fault	Description of fault	Reason of fault	Solution / Remedy
it is not possible to switch device on	there are no pilot lights or device immediately switches off	power failure	switch on the I/O rocker switch on the rear panel of the device
			check the mains supply and connection into the wall outlet
			check fuse
			replace battery
		electronic failure	carry out the reset of device
			check the internal link cable between CPU and Power board
			measure the voltage on the Power board
	device switches off after a few seconds	discharged battery, power failure	see "power failure"
		defective keyboard	change keyboard
device switches off	device switches off after a certain period	function of automatic switching off the device is set	modify unit setting in the menu according to your needs
		discharged battery, power failure	see "power failure"
printing is not working properly	printer pilot light is shining	paper fault	add paper
			check insertion of paper
			clean the paper sensor
		printer failure	check the locking lever / closed printer cover
	printing stops or device switches off	discharged battery, power failure	see "power failure"
	blank paper is coming out from the printer	discharged battery, power failure	see "power failure"
		unsuitable paper	check the correct paper orientation
			use only BTL original thermosensitive paper
	printing subsequently gets weaker	unsuitable paper	see "power failure"
			use only BTL original thermosensitive paper
	poorly visible printing	print setting	set the width of line in the menu of device
			modify the setting of paper sensitivity in the menu of device
	straight dashed lines are printed	loose leads	check connection of electrodes
			use ECG gel
			set pacemaker YES on Patient card setting
			replace the patient cable with a new one
	there are empty places in printing	unclean printer	clean the printer head
		defective printer	change the printer
device does not respond	"wait please" message is shining on the screen for a longer time than 5 min.	program fault	carry out the reset of device
communication is not working	export data fault	wrong setting	set the type of communication to serial export
			check the setting and port functionality of PC
		HW fault	check the connection of communication cable in the device and PC
			connect to another PC port
			replace the communication cable (USB adapter)
touch-panel is not working properly	the place of pressing is out of the touch place	calibration fault	carry out touch panel calibration
	device does not respond to touching	calibration fault	carry out touch panel calibration
		defective touch panel	replace touch panel
it is not possible to acquire the record	device displays loose lead	defective lead	see "loose leads"
	straight dashed lines are printed	defective lead	see "loose leads"

Medical Technologies

BTL-08 Series ECG

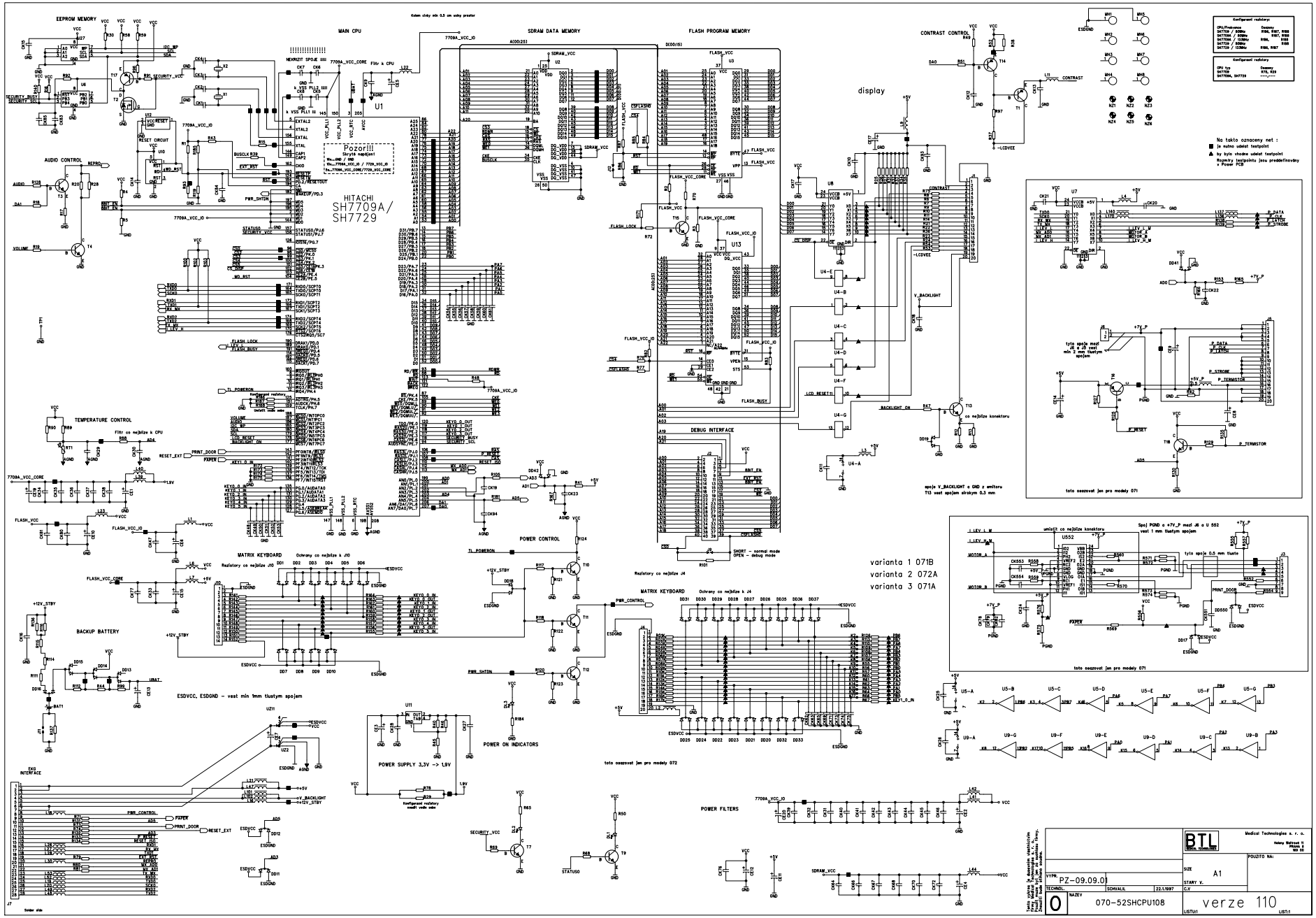
Electrical Sheets

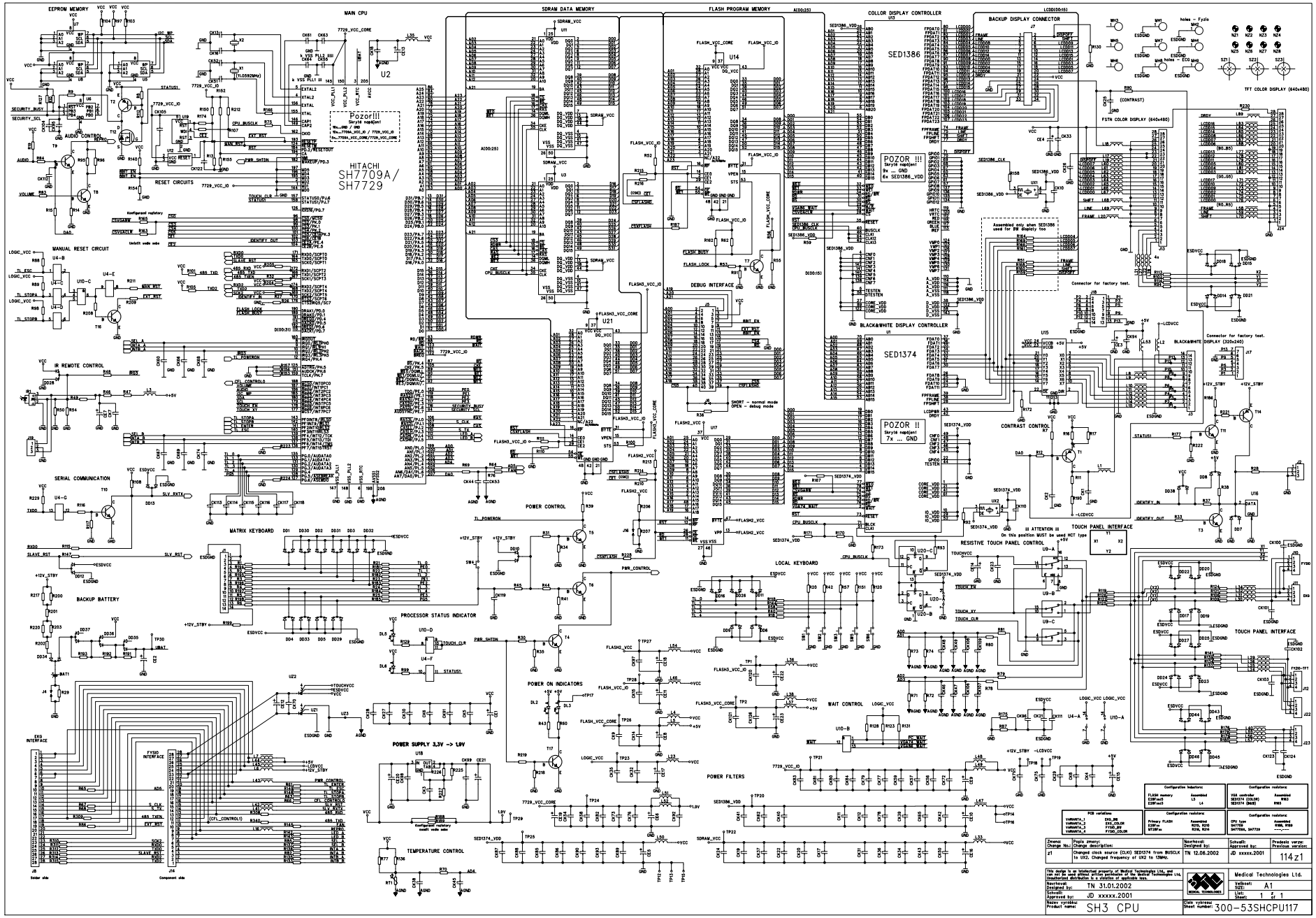


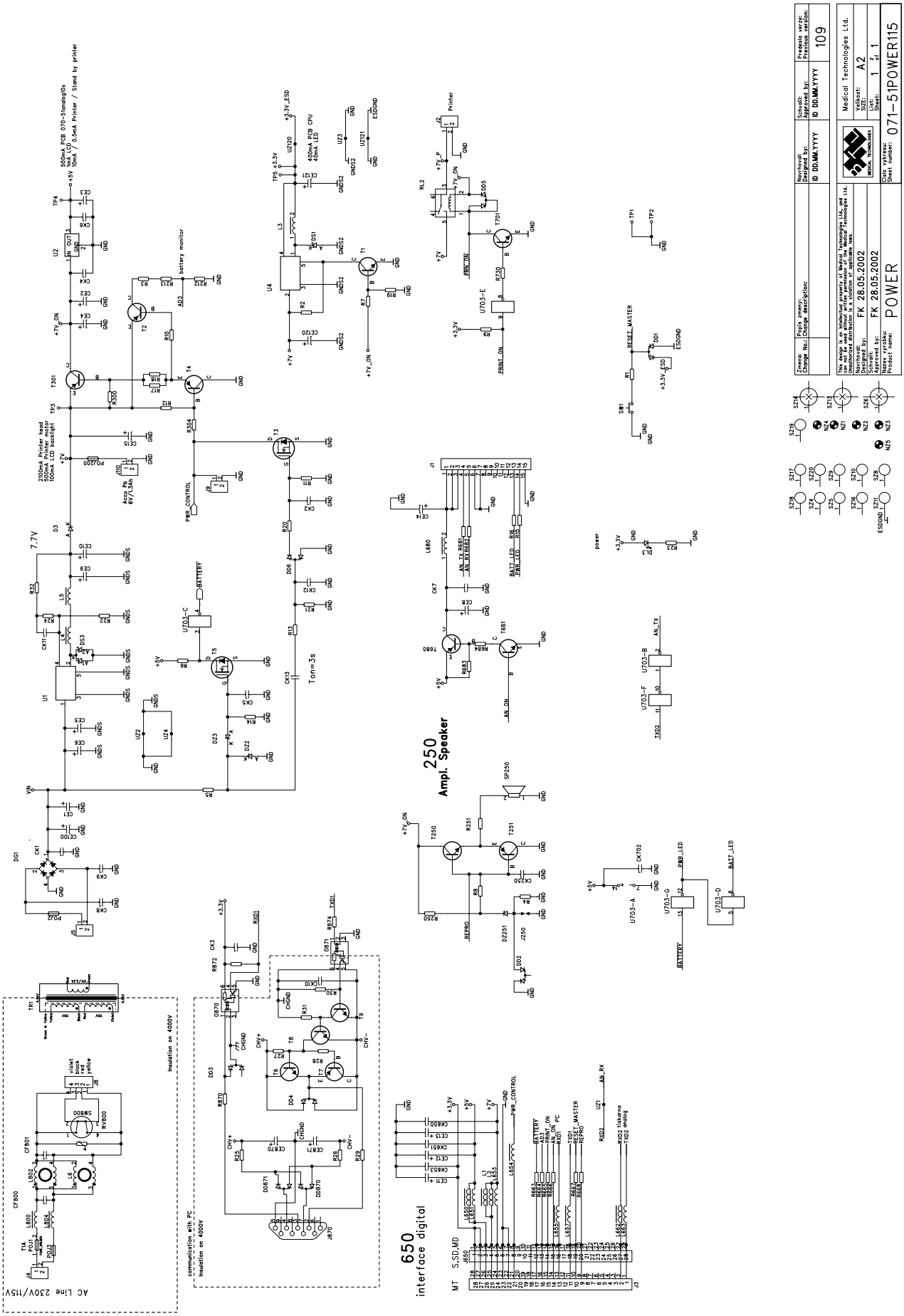
Insulation 4kV, creepage distance 8mm.
Insulation 3kV, creepage distance 6mm.
Insulation 1.5kV, creepage distance 4mm.

Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:

Název výrobku: Product name:	**BTL070 (FLOW SHEET)**			
MEDICAL TECHNOLOGIES	Kreslil: Drown by: **PZ09.07.2001**	Materiál: Material:		
	Konstr.: Designed by: **PZ09.07.2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by:	List: Sheet: **1** z of **1**	Číslo výkresu: Sheet number:	**070-54pri100**


EEPROM MEMORY
MAIN CPU
SDRAM DATA MEMORY
FLASH PROGRAM MEMORY
HITACHI
SH7709A/
SH7729
AUDIO CONTROL
TEMPERATURE CONTROL
BACKUP BATTERY
MATRIX KEYBOARD
DEBUG INTERFACE
POWER CONTROL
POWER ON INDICATORS
POWER SUPPLY 3,3V -> 1,8V
POWER FILTERS
CONTRAST CONTROL
display
varianta 1 071B
varianta 2 072A
varianta 3 071A
ESDVCC, ESDGND - vest min 1mm tlustym spojem
toto osazovat jen pro modely 072
toto osazovat jen pro modely 071
BTL
Medical Technologies s. r. o.
PZ-09.09.01
070-52SHCPU108
verze 110


HITACHI
SH7709A/
SH7729
SED1386
SED1374
Pozor!!!
Pozor !!!
POZOR !!!
POZOR !!
EEPROM MEMORY
MAIN CPU
SDRAM DATA MEMORY
FLASH PROGRAM MEMORY
COLLOR DISPLAY CONTROLLER
BACKUP DISPLAY CONNECTOR
TFT COLOR DISPLAY (640x480)
FSTN COLOR DISPLAY (640x480)
BLACK&WHITE DISPLAY CONTROLLER
BLACK&WHITE DISPLAY (320x240)
AUDIO CONTROL
RESET CIRCUITS
MANUAL RESET CIRCUIT
IR REMOTE CONTROL
SERIAL COMMUNICATION
BACKUP BATTERY
MATRIX KEYBOARD
PROCESSOR STATUS INDICATOR
DEBUG INTERFACE
POWER CONTROL
POWER ON INDICATORS
POWER SUPPLY 3,3V -> 1,9V
TEMPERATURE CONTROL
LOCAL KEYBOARD
WAIT CONTROL
POWER FILTERS
CONTRAST CONTROL
RESISTIVE TOUCH PANEL CONTROL
TOUCH PANEL INTERFACE
EXG INTERFACE
FYSIO INTERFACE
SH3 CPU
Medical Technologies Ltd.
Vydal/vil: A1
Sheet: 1 of 1
Číslo výkresu/ Sheet number: 300-53SHCPU117
Nov.hodnota/ Designed by: TN 12.06.2002
Schválil/ Approved by: JD xxxxx.2001
Změna/ Change No: z1
Popis změny/ Change description: Changed clock source (CLK0) SED1374 from BUSCLK to UX2, Changed frequency of UX2 to 15MHz.
Předešlá verze/ Previous version: 114z1


500mA PCB 070-51analog0x
10mA LCD
0.5mA Printer / Stand by printer
battery monitor
210mA Printer head
450mA Peltier control
100mA LCD backlight
Accu Pb 6V/7.3Ah
7.7V
BATTERY
Ton=3s
250
Ampl. Speaker
650
interface digital
AC Line 230V/115V
Insulation on 4000V
communication with PC
Insulation on 4000V
400mA PCB CPU
40mA LED
Printer
RESET_MASTER
power
PWR_CONTROL
PRINT_ON
AN_TX
AN_RX
BATT_LED
PWR_LED
BATTERY
Znamo
Change No:
Popis zmeny:
Change description:
Navrhovál:
Designed by:
ID DD.MM.YYYY
Schválil:
Approved by:
ID DD.MM.YYYY
Predpisla verze:
Previous version:
109
Medical Technologies Ltd.
Velikost:
Size:
A2
List:
Sheet:
1 of 1
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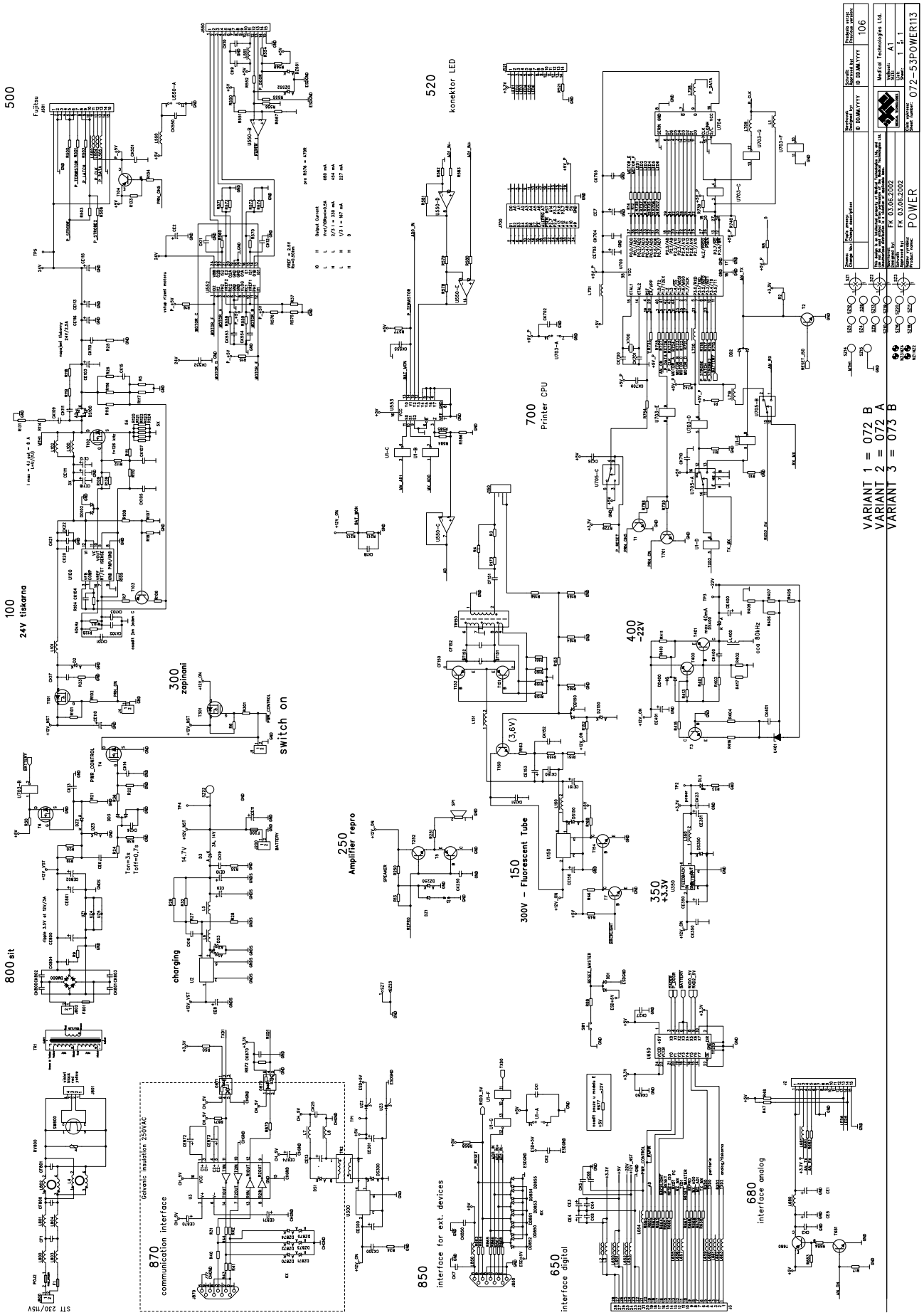
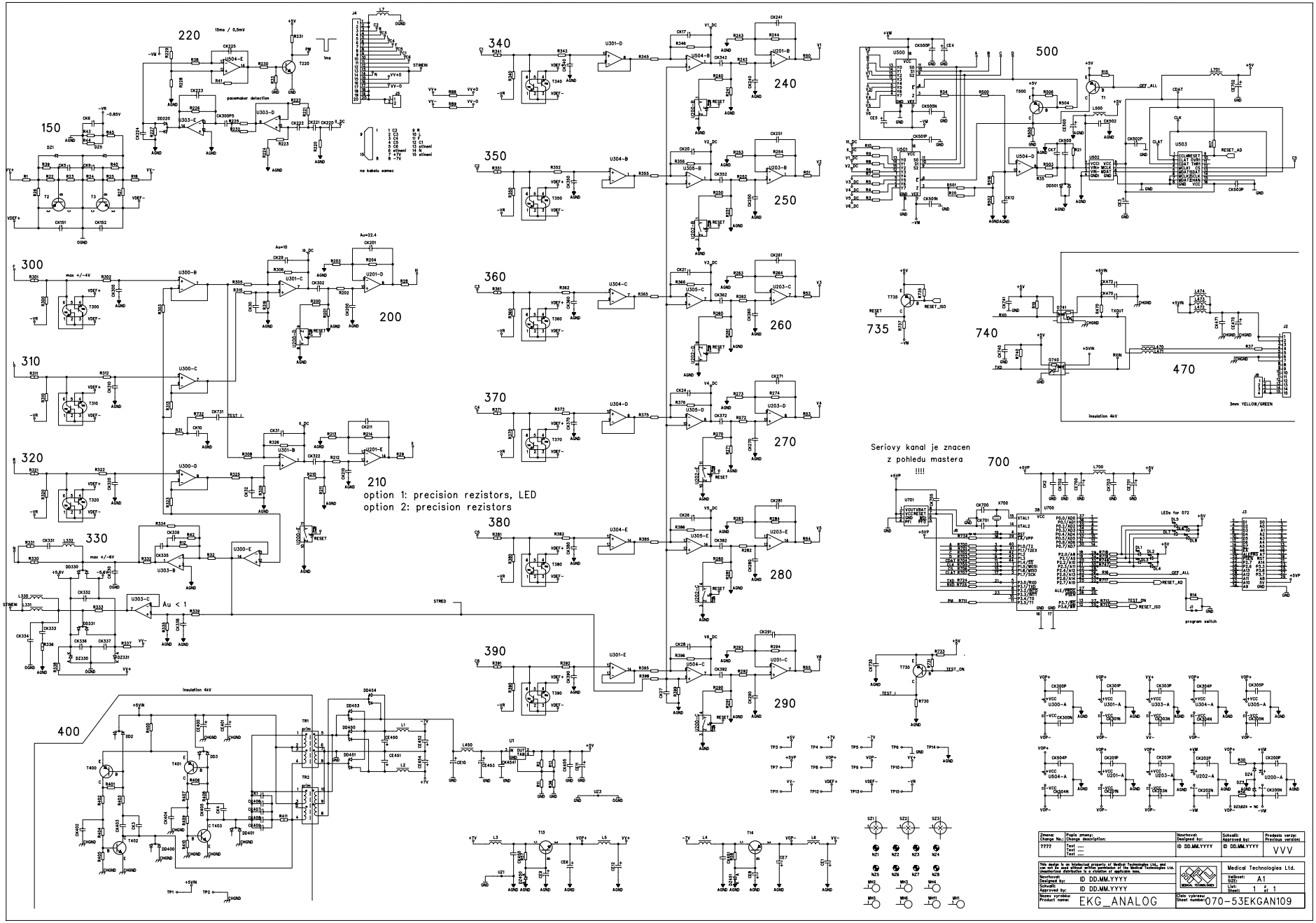
Navrhovál:
Designed by:
FK 28.05.2002
Schválil:
Approved by:
FK 28.05.2002
Číslo výkresu:
Sheet number:
071-51POWER115
Název výkresu:
Project name:
POWER


500
Fujitsu
100
24V tiskarna
switch on
300
zapinani
520
konektor LED
700
Printer CPU
400
-22V
250
Amplifier repro
150
300V - Fluorescent Tube
350
+3V
800 sit
charging
870
communication interface
Galvanic insulation 250VAC
850
interface for ext. devices
650
interface digital
680
interface analog
VARIANT 1 = 072 B
VARIANT 2 = 072 A
VARIANT 3 = 073 B
Medical Technologies Ltd.
072-53POWER113
POWER
FK 03.06.2002



Zmenc Change No.:	Popis zmeny: Change description:	Navrhovol: Designed by:	Schvalil: Approved by:	Predesla verze: Previous version:
????	Text .... Text .... Text	ID DD.MM.YYYY	ID DD.MM.YYYY	VVV

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Navrhovol: Designed by:	ID DD.MM.YYYY	Medical Technologies Ltd.	
Schvalil: Approved by:	ID DD.MM.YYYY	Verze/cert: SVD:	A1
Nazev vyrobku: Product name:	EKG_ANALOG	Cislo vykresu: Sheet number:	070-53EKGAN109
		List: Sheet:	1 of 1

List of Components

PCB CPU for
BTL-08 S ECG
BTL-08 SD ECG
BTL-08 MD ECG

BAT1	EBAT-CR2430HXX0
CE3	ECE+10U35VXXM
CE5	ECE+10U35VXXM
CE8	ECE+10U35VXXM
CE11	ECE+10U35VXXM
CE12	ECE+10U35VXXM
CE13	ECE+10U35VXXM
CE17	ECE+10U35VXXM
CE1	ECE+47U35VXXM
CE2	ECE+47U35VXXM
CE4	ECE+47U35VXXM
CE6	ECE+47U35VXXM
CE7	ECE+47U35VXXM
CE10	ECE+47U35VXXM
CE14	ECE+47U35VXXM
CE15	ECE+47U35VXXM
CE19	ECE+47U35VXXM
CE20	ECE+47U35VXXM
CE9	ECE-330U35VXXT
CK5	ECK+100N50VXXZ
CK6	ECK+100N50VXXZ
CK9	ECK+100N50VXXZ
CK10	ECK+100N50VXXZ
CK11	ECK+100N50VXXZ
CK12	ECK+100N50VXXZ
CK13	ECK+100N50VXXZ
CK14	ECK+100N50VXXZ
CK15	ECK+100N50VXXZ
CK16	ECK+100N50VXXZ
CK17	ECK+100N50VXXZ
CK18	ECK+100N50VXXZ
CK20	ECK+100N50VXXZ
CK21	ECK+100N50VXXZ
CK24	ECK+100N50VXXZ
CK25	ECK+100N50VXXZ
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CK28	ECK+100N50VXXZ
CK29	ECK+100N50VXXZ
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CK32	ECK+100N50VXXZ
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CK81	ECK+100N50VXXZ
CK82	ECK+100N50VXXZ
CK83	ECK+100N50VXXZ
CK84	ECK+100N50VXXZ
CK85	ECK+100N50VXXZ
CK93	ECK+100N50VXXZ
CK19	ECK+10N50VXXZ
CK22	ECK+10N50VXXZ
CK23	ECK+10N50VXXZ
CK94	ECK+10N50VXXZ
CK551	ECK+1N50VXXJ
CK553	ECK+1N50VXXJ
CK554	ECK+1N50VXXJ
CK1	ECK+22P50VXXJ
CK2	ECK+22P50VXXJ
CK3	ECK+22P50VXXJ
CK4	ECK+22P50VXXJ
CK7	ECK+470P50VXXJ
CK8	ECK+470P50VXXJ
CK48	ECK+470P50VXXJ
CK49	ECK+470P50VXXJ
CK50	ECK+470P50VXXJ
CK51	ECK+470P50VXXJ
CK52	ECK+470P50VXXJ
CK53	ECK+470P50VXXJ
CK54	ECK+470P50VXXJ
CK55	ECK+470P50VXXJ
CK56	ECK+470P50VXXJ
CK57	ECK+470P50VXXJ
CK58	ECK+470P50VXXJ
CK59	ECK+470P50VXXJ
CK60	ECK+470P50VXXJ
CK61	ECK+470P50VXXJ
CK62	ECK+470P50VXXJ
CK63	ECK+470P50VXXJ
CK65	ECK+470P50VXXJ
CK69	ECK+470P50VXXJ
CK71	ECK+470P50VXXJ
CK73	ECK+470P50VXXJ
CK74	ECK+470P50VXXJ
CK75	ECK+470P50VXXJ
DD1	EDD+BAV99XX0
DD2	EDD+BAV99XX0
DD3	EDD+BAV99XX0
DD4	EDD+BAV99XX0
DD5	EDD+BAV99XX0
DD6	EDD+BAV99XX0
DD7	EDD+BAV99XX0
DD8	EDD+BAV99XX0
DD9	EDD+BAV99XX0
DD10	EDD+BAV99XX0
DD11	EDD+BAV99XX0
DD12	EDD+BAV99XX0
DD13	EDD+BAV99XX0
DD14	EDD+BAV99XX0
DD15	EDD+BAV99XX0
DD16	EDD+BAV99XX0
DD17	EDD+BAV99XX0
DD18	EDD+BAV99XX0
DD19	EDD+BAV99XX0
DD20	EDD+BAV99XX0
DD21	EDD+BAV99XX0
DD22	EDD+BAV99XX0
DD23	EDD+BAV99XX0
DD24	EDD+BAV99XX0
DD25	EDD+BAV99XX0
DD26	EDD+BAV99XX0
DD27	EDD+BAV99XX0
DD28	EDD+BAV99XX0
DD29	EDD+BAV99XX0
DD30	EDD+BAV99XX0
DD31	EDD+BAV99XX0
DD32	EDD+BAV99XX0
DD33	EDD+BAV99XX0
DD35	EDD+BAV99XX0
DD36	EDD+BAV99XX0
DD37	EDD+BAV99XX0
DD41	EDD+BAV99XX0
DD42	EDD+BAV99XX0
DD550	EDD+BAV99XX0
DL3	EDL+SMDGREENXX0
DL1	EDL+SMDYELOWXX0
DL2	EDL+SMDYELOWXX0
J7	EJ+52435-28MX0
J9	EJ+JUMPERXX0
J11	EJ+JUMPERXX0
J12	EJ+JUMPERXX0
J10	EJ-52044-14MX0
J4	EJ-52045-20MX0
J5	EJ-52045-20MX0
J3	EJ-53047-09MX0
J6	EJ-B02-VHJS0
J2	EJ-BL840GDXX0
J1	EJ-S1G20XX0
L1	EL+JCB09151XX0
L5	EL+JCB09151XX0
L6	EL+JCB09151XX0
L7	EL+JCB09151XX0
L16	EL+JCB09151XX0
L19	EL+JCB09151XX0
L20	EL+JCB09151XX0
L21	EL+JCB09151XX0
L23	EL+JCB09151XX0
L26	EL+JCB09151XX0
L27	EL+JCB09151XX0
L28	EL+JCB09151XX0
L39	EL+JCB09151XX0
L40	EL+JCB09151XX0
L41	EL+JCB09151XX0
L42	EL+JCB09151XX0
L44	EL+JCB09151XX0
L47	EL+JCB09151XX0
L48	EL+JCB09151XX0
L49	EL+JCB09151XX0
L52	EL+JCB09151XX0
L101	EL+JCB09151XX0
L102	EL+JCB09151XX0
L140	EL+JCB09151XX0
L170	EL+JCB09151XX0
L2	EL+JCB09152XX0
L3	EL+JCB09152XX0
L4	EL+JCB09152XX0
L9	EL+JCB09152XX0
L11	EL+JCB09152XX0
L18	EL+JCB09152XX0
L22	EL+JCB09152XX0
L30	EL+JCB09152XX0
L53	EL+JCB09152XX0
L136	EL+JCB09152XX0
L137	EL+JCB09152XX0
R17	ER+0RXX1
R29	ER+0RXX1
R44	ER+0RXX1
R48	ER+0RXX1
R76	ER+0RXX1
R77	ER+0RXX1
R78	ER+0RXX1
R84	ER+0RXX1
R85	ER+0RXX1
R86	ER+0RXX1
R92	ER+0RXX1
R99	ER+0RXX1
R101	ER+0RXX1
R112	ER+0RXX1
R115	ER+0RXX1
R116	ER+0RXX1
R137	ER+0RXX1
R172	ER+0RXX1
R173	ER+0RXX1
R174	ER+0RXX1
R175	ER+0RXX1
R186	ER+0RXX1
R187	ER+0RXX1
R188	ER+0RXX1
R3	ER+100K0.1WXXF
R51	ER+100K0.1WXXF
R93	ER+100K0.1WXXF
R96	ER+100K0.1WXXF
R91	ER+10K0.1WXXF
R6	ER+10R0.1WXXF
R7	ER+10R0.1WXXF
R8	ER+10R0.1WXXF
R9	ER+10R0.1WXXF
R10	ER+10R0.1WXXF
R11	ER+10R0.1WXXF
R12	ER+10R0.1WXXF
R14	ER+10R0.1WXXF
R15	ER+10R0.1WXXF
R21	ER+10R0.1WXXF
R22	ER+10R0.1WXXF
R23	ER+10R0.1WXXF
R24	ER+10R0.1WXXF

R36	ER+10R0.1WXXF
R53	ER+10R0.1WXXF
R54	ER+10R0.1WXXF
R75	ER+10R0.1WXXF
R557	ER+1K0.1WXXF
R560	ER+1K0.1WXXF
R570	ER+1K0.1WXXF
R575	ER+1K0.1WXXF
R576	ER+1K0.1WXXF
R49	ER+1M0.1WXXF
R111	ER+1M0.1WXXF
R114	ER+1M0.1WXXF
R136	ER+1M0.1WXXF
R42	ER+1R0.1WXXJ
R571	ER+1R0.1WXXJ
R572	ER+1R0.1WXXJ
R573	ER+1R0.1WXXJ
R574	ER+1R0.1WXXJ
R45	ER+220R0.1WXXF
R18	ER+22K0.1WXXF
R40	ER+470R0.1WXXF
R43	ER+470R0.1WXXF
R47	ER+470R0.1WXXF
R50	ER+470R0.1WXXF
R55	ER+470R0.1WXXF
R56	ER+470R0.1WXXF
R57	ER+470R0.1WXXF
R60	ER+470R0.1WXXF
R61	ER+470R0.1WXXF
R62	ER+470R0.1WXXF
R63	ER+470R0.1WXXF
R64	ER+470R0.1WXXF
R65	ER+470R0.1WXXF
R66	ER+470R0.1WXXF
R67	ER+470R0.1WXXF
R71	ER+470R0.1WXXF
R73	ER+470R0.1WXXF
R74	ER+470R0.1WXXF
R79	ER+470R0.1WXXF
R80	ER+470R0.1WXXF
R81	ER+470R0.1WXXF
R105	ER+470R0.1WXXF
R106	ER+470R0.1WXXF
R107	ER+470R0.1WXXF
R108	ER+470R0.1WXXF
R109	ER+470R0.1WXXF
R110	ER+470R0.1WXXF
R113	ER+470R0.1WXXF
R126	ER+470R0.1WXXF
R131	ER+470R0.1WXXF
R132	ER+470R0.1WXXF
R133	ER+470R0.1WXXF
R134	ER+470R0.1WXXF
R138	ER+470R0.1WXXF
R139	ER+470R0.1WXXF
R141	ER+470R0.1WXXF
R142	ER+470R0.1WXXF
R143	ER+470R0.1WXXF
R144	ER+470R0.1WXXF
R145	ER+470R0.1WXXF
R146	ER+470R0.1WXXF
R147	ER+470R0.1WXXF
R148	ER+470R0.1WXXF
R149	ER+470R0.1WXXF
R150	ER+470R0.1WXXF
R151	ER+470R0.1WXXF
R152	ER+470R0.1WXXF
R155	ER+470R0.1WXXF
R156	ER+470R0.1WXXF
R157	ER+470R0.1WXXF
R158	ER+470R0.1WXXF
R159	ER+470R0.1WXXF
R160	ER+470R0.1WXXF
R161	ER+470R0.1WXXF
R162	ER+470R0.1WXXF
R163	ER+470R0.1WXXF
R164	ER+470R0.1WXXF
R181	ER+470R0.1WXXF
R184	ER+470R0.1WXXF
R185	ER+470R0.1WXXF
R555	ER+470R0.1WXXF
R01K	ER+470R0.1WXXF
R02K	ER+470R0.1WXXF
R03K	ER+470R0.1WXXF
R04K	ER+470R0.1WXXF
R05K	ER+470R0.1WXXF
R06K	ER+470R0.1WXXF
R07K	ER+470R0.1WXXF
R08K	ER+470R0.1WXXF
R09K	ER+470R0.1WXXF
R10K	ER+470R0.1WXXF
R11K	ER+470R0.1WXXF
R12K	ER+470R0.1WXXF
R13K	ER+470R0.1WXXF
R14K	ER+470R0.1WXXF
R15K	ER+470R0.1WXXF
R16K	ER+470R0.1WXXF
R17K	ER+470R0.1WXXF
R2	ER+47K0.1WXXF
R4	ER+47K0.1WXXF
R5	ER+47K0.1WXXF
R25	ER+47K0.1WXXF
R26	ER+47K0.1WXXF
R27	ER+47K0.1WXXF
R31	ER+47K0.1WXXF
R32	ER+47K0.1WXXF
R33	ER+47K0.1WXXF
R34	ER+47K0.1WXXF
R35	ER+47K0.1WXXF
R82	ER+47K0.1WXXF
R100	ER+47K0.1WXXF
R102	ER+47K0.1WXXF
R103	ER+47K0.1WXXF
R119	ER+47K0.1WXXF
R135	ER+47K0.1WXXF
R171	ER+47K0.1WXXF
R556	ER+47K0.1WXXF
R558	ER+47K0.1WXXF
R559	ER+47K0.1WXXF
R569	ER+47K0.1WXXF
R39	ER+47R0.1WXXF
R1	ER+4K70.1WXXF
R16	ER+4K70.1WXXF
R19	ER+4K70.1WXXF
R20	ER+4K70.1WXXF
R28	ER+4K70.1WXXF
R30	ER+4K70.1WXXF
R37	ER+4K70.1WXXF
R38	ER+4K70.1WXXF
R41	ER+4K70.1WXXF
R46	ER+4K70.1WXXF
R52	ER+4K70.1WXXF
R58	ER+4K70.1WXXF
R59	ER+4K70.1WXXF
R68	ER+4K70.1WXXF
R69	ER+4K70.1WXXF
R70	ER+4K70.1WXXF
R72	ER+4K70.1WXXF
R83	ER+4K70.1WXXF
R87	ER+4K70.1WXXF
R88	ER+4K70.1WXXF
R89	ER+4K70.1WXXF
R90	ER+4K70.1WXXF
R97	ER+4K70.1WXXF
R117	ER+4K70.1WXXF
R118	ER+4K70.1WXXF
R120	ER+4K70.1WXXF
R121	ER+4K70.1WXXF
R122	ER+4K70.1WXXF
R123	ER+4K70.1WXXF
R124	ER+4K70.1WXXF
R125	ER+4K70.1WXXF
R127	ER+4K70.1WXXF
R128	ER+4K70.1WXXF
R129	ER+4K70.1WXXF
R130	ER+4K70.1WXXF
R140	ER+4K70.1WXXF
R153	ER+4K70.1WXXF
R165	ER+4K70.1WXXF
R166	ER+4K70.1WXXF
R167	ER+4K70.1WXXF
R552	ER+4K70.1WXXF
R554	ER+4K70.1WXXF
R13	ER+4R70.1WXXJ
RT1	ERT+KTY82220PH0
T1	ET+BC807-40XX0
T17	ET+BC807-40XX0
T3	ET+BC817-40XX0
T4	ET+BC817-40XX0
T7	ET+BC817-40XX0
T9	ET+BC817-40XX0
T10	ET+BC817-40XX0
T11	ET+BC817-40XX0
T12	ET+BC817-40XX0
T15	ET+BC817-40XX0
T18	ET+BC817-40XX0
T14	ET+BCX52-16XX0
T16	ET+BCX52-16XX0
T13	ET+BCX55-16XX0
T2	ET+BSS138XX0
U27	EU+24LC256XX0
U5	EU+74HC04XX0
U9	EU+74HC04XX0
U4	EU+74HCT04XX0
U7	EU+74LVC4245XX0
U8	EU+74LVC4245XX0
U13	EU+E28F320XX0
U1	EU+HD7729HI0
U11	EU+LM1117ADJXX0
U10	EU+MAX6318XX0
U12	EU+MCP120XX0
U3	EU+MT28F800BXX0
U2	EU+MT48LC1MXX0
U552	EU+UDN2916XX0
U6	EU-AT90L2343AT0
X1	EX+11.059MXX0
X2	EX+32.768KXX0

PCB CPU for BTL-08 MT ECG

BAT1	EBAT-CR2430HXX0
CE2	ECE+10U35VXXM
CE3	ECE+10U35VXXM
CE5	ECE+10U35VXXM
CE7	ECE+10U35VXXM
CE8	ECE+10U35VXXM
CE11	ECE+10U35VXXM
CE13	ECE+10U35VXXM
CE15	ECE+10U35VXXM
CE17	ECE+10U35VXXM
CE20	ECE+10U35VXXM
CE21	ECE+10U35VXXM
CE22	ECE+10U35VXXM
CE23	ECE+10U35VXXM
CE1	ECE+47U35VXXM
CE4	ECE+47U35VXXM
CE6	ECE+47U35VXXM
CE9	ECE+47U35VXXM
CE10	ECE+47U35VXXM
CE12	ECE+47U35VXXM
CE14	ECE+47U35VXXM
CE16	ECE+47U35VXXM
CE18	ECE+47U35VXXM
CE19	ECE+47U35VXXM
CK1	ECK+100N50VXXZ
CK2	ECK+100N50VXXZ
CK3	ECK+100N50VXXZ
CK4	ECK+100N50VXXZ
CK5	ECK+100N50VXXZ
CK6	ECK+100N50VXXZ
CK7	ECK+100N50VXXZ
CK8	ECK+100N50VXXZ
CK9	ECK+100N50VXXZ
CK10	ECK+100N50VXXZ
CK11	ECK+100N50VXXZ
CK12	ECK+100N50VXXZ
CK14	ECK+100N50VXXZ
CK15	ECK+100N50VXXZ
CK17	ECK+100N50VXXZ
CK18	ECK+100N50VXXZ
CK19	ECK+100N50VXXZ
CK20	ECK+100N50VXXZ
CK21	ECK+100N50VXXZ
CK22	ECK+100N50VXXZ
CK23	ECK+100N50VXXZ
CK24	ECK+100N50VXXZ
CK25	ECK+100N50VXXZ
CK26	ECK+100N50VXXZ
CK27	ECK+100N50VXXZ
CK28	ECK+100N50VXXZ
CK29	ECK+100N50VXXZ
CK30	ECK+100N50VXXZ
CK31	ECK+100N50VXXZ
CK32	ECK+100N50VXXZ
CK33	ECK+100N50VXXZ
CK34	ECK+100N50VXXZ
CK35	ECK+100N50VXXZ
CK36	ECK+100N50VXXZ
CK37	ECK+100N50VXXZ

CK38	ECK+100N50VXXZ
CK39	ECK+100N50VXXZ
CK40	ECK+100N50VXXZ
CK41	ECK+100N50VXXZ
CK42	ECK+100N50VXXZ
CK43	ECK+100N50VXXZ
CK45	ECK+100N50VXXZ
CK50	ECK+100N50VXXZ
CK54	ECK+100N50VXXZ
CK55	ECK+100N50VXXZ
CK56	ECK+100N50VXXZ
CK57	ECK+100N50VXXZ
CK58	ECK+100N50VXXZ
CK59	ECK+100N50VXXZ
CK62	ECK+100N50VXXZ
CK63	ECK+100N50VXXZ
CK65	ECK+100N50VXXZ
CK70	ECK+100N50VXXZ
CK71	ECK+100N50VXXZ
CK72	ECK+100N50VXXZ
CK73	ECK+100N50VXXZ
CK75	ECK+100N50VXXZ
CK76	ECK+100N50VXXZ
CK77	ECK+100N50VXXZ
CK78	ECK+100N50VXXZ
CK79	ECK+100N50VXXZ
CK80	ECK+100N50VXXZ
CK81	ECK+100N50VXXZ
CK82	ECK+100N50VXXZ
CK83	ECK+100N50VXXZ
CK84	ECK+100N50VXXZ
CK85	ECK+100N50VXXZ
CK86	ECK+100N50VXXZ
CK87	ECK+100N50VXXZ
CK88	ECK+100N50VXXZ
CK89	ECK+100N50VXXZ
CK90	ECK+100N50VXXZ
CK91	ECK+100N50VXXZ
CK92	ECK+100N50VXXZ
CK93	ECK+100N50VXXZ
CK94	ECK+100N50VXXZ
CK95	ECK+100N50VXXZ
CK96	ECK+100N50VXXZ
CK97	ECK+100N50VXXZ
CK98	ECK+100N50VXXZ
CK99	ECK+100N50VXXZ
CK104	ECK+100N50VXXZ
CK105	ECK+100N50VXXZ
CK110	ECK+100N50VXXZ
CK111	ECK+100N50VXXZ
CK120	ECK+100N50VXXZ
CK121	ECK+100N50VXXZ
CK122	ECK+100N50VXXZ
CK126	ECK+100N50VXXZ
CK113	ECK+100P50VXXJ
CK114	ECK+100P50VXXJ
CK115	ECK+100P50VXXJ
CK116	ECK+100P50VXXJ
CK117	ECK+100P50VXXJ
CK118	ECK+100P50VXXJ
CK119	ECK+100P50VXXJ
CK44	ECK+10N50VXXZ
CK53	ECK+10N50VXXZ
CK60	ECK+10N50VXXZ
CK66	ECK+10N50VXXZ
CK67	ECK+10N50VXXZ
CK68	ECK+10N50VXXZ
CK69	ECK+10N50VXXZ
CK74	ECK+10N50VXXZ
CK46	ECK+1N50VXXJ
CK47	ECK+1N50VXXJ
CK48	ECK+1N50VXXJ
CK49	ECK+1N50VXXJ
CK100	ECK+1N50VXXJ
CK101	ECK+1N50VXXJ
CK102	ECK+1N50VXXJ
CK103	ECK+1N50VXXJ
CK106	ECK+1N50VXXJ
CK107	ECK+1N50VXXJ
CK108	ECK+1N50VXXJ
CK109	ECK+1N50VXXJ
CK112	ECK+1N50VXXJ
CK123	ECK+1N50VXXJ
CK124	ECK+1N50VXXJ
CK13	ECK+22P50VXXJ
CK16	ECK+22P50VXXJ
CK51	ECK+22P50VXXJ
CK52	ECK+22P50VXXJ
CK61	ECK+470P50VXXJ
CK64	ECK+470P50VXXJ
DD1	EDD+BAV99XX0
DD2	EDD+BAV99XX0
DD3	EDD+BAV99XX0
DD4	EDD+BAV99XX0
DD5	EDD+BAV99XX0
DD6	EDD+BAV99XX0
DD7	EDD+BAV99XX0
DD8	EDD+BAV99XX0
DD9	EDD+BAV99XX0
DD10	EDD+BAV99XX0
DD11	EDD+BAV99XX0
DD12	EDD+BAV99XX0
DD13	EDD+BAV99XX0
DD14	EDD+BAV99XX0
DD15	EDD+BAV99XX0
DD16	EDD+BAV99XX0
DD17	EDD+BAV99XX0
DD18	EDD+BAV99XX0
DD19	EDD+BAV99XX0
DD20	EDD+BAV99XX0
DD21	EDD+BAV99XX0
DD22	EDD+BAV99XX0
DD23	EDD+BAV99XX0
DD24	EDD+BAV99XX0
DD25	EDD+BAV99XX0
DD26	EDD+BAV99XX0
DD27	EDD+BAV99XX0
DD28	EDD+BAV99XX0
DD29	EDD+BAV99XX0
DD30	EDD+BAV99XX0
DD31	EDD+BAV99XX0
DD32	EDD+BAV99XX0
DD33	EDD+BAV99XX0
DD34	EDD+BAV99XX0
DD35	EDD+BAV99XX0
DD36	EDD+BAV99XX0
DD37	EDD+BAV99XX0
DD38	EDD+BAV99XX0
DD43	EDD+BAV99XX0
DD44	EDD+BAV99XX0
DD45	EDD+BAV99XX0
DD46	EDD+BAV99XX0
DL5	EDL+SMDGREENXX0
DL6	EDL+SMDGREENXX0
DL2	EDL-5MMBLUEXX0
DL3	EDL-5MMBLUEXX0
IR1	EIR-IRM8601SEV0
J22	EJ+52207-04MX0
J23	EJ+52207-04MX0
J8	EJ+52435-28MX0
J13	EJ+52435-28MX0
J14	EJ+52435-28MX0
J24	EJ+52435-28MX0
J7	EJ+6504-34P2XX0
J4	EJ+JUMPERXX0
J6	EJ+JUMPERXX0
J16	EJ+JUMPERXX0
J10	EJ-52044-04MX0
J11	EJ-52044-04MX0
J1	EJ-52044-14MX0
J3	EJ-52044-14MX0
J18	EJ-BL814GDXX0
J5	EJ-BL840GDXX0
J2	EJ-S1G3XX0
J19	EJ-S1G3XX0
J12	EJ-S1G4WXX0
J17	EJ-S1G7RM2.5XX0
L4	EL+JCB09151XX0
L5	EL+JCB09151XX0
L6	EL+JCB09151XX0
L7	EL+JCB09151XX0
L8	EL+JCB09151XX0
L9	EL+JCB09151XX0
L10	EL+JCB09151XX0
L11	EL+JCB09151XX0
L12	EL+JCB09151XX0
L13	EL+JCB09151XX0
L14	EL+JCB09151XX0
L15	EL+JCB09151XX0
L23	EL+JCB09151XX0
L33	EL+JCB09151XX0
L36	EL+JCB09151XX0
L37	EL+JCB09151XX0
L38	EL+JCB09151XX0
L44	EL+JCB09151XX0
L45	EL+JCB09151XX0
L46	EL+JCB09151XX0
L47	EL+JCB09151XX0
L48	EL+JCB09151XX0
L49	EL+JCB09151XX0
L50	EL+JCB09151XX0
L51	EL+JCB09151XX0
L52	EL+JCB09151XX0
L54	EL+JCB09151XX0
L58	EL+JCB09151XX0
L59	EL+JCB09151XX0
L60	EL+JCB09151XX0
L61	EL+JCB09151XX0
L62	EL+JCB09151XX0
L63	EL+JCB09151XX0
L64	EL+JCB09151XX0
L65	EL+JCB09151XX0
L66	EL+JCB09151XX0
L67	EL+JCB09151XX0
L68	EL+JCB09151XX0
L69	EL+JCB09151XX0
L70	EL+JCB09151XX0
L71	EL+JCB09151XX0
L72	EL+JCB09151XX0
L73	EL+JCB09151XX0
L74	EL+JCB09151XX0
L75	EL+JCB09151XX0
L76	EL+JCB09151XX0
L77	EL+JCB09151XX0
L78	EL+JCB09151XX0
L79	EL+JCB09151XX0
L80	EL+JCB09151XX0
L81	EL+JCB09151XX0
L82	EL+JCB09151XX0
L83	EL+JCB09151XX0
L84	EL+JCB09151XX0
L85	EL+JCB09151XX0
L86	EL+JCB09151XX0
L87	EL+JCB09151XX0
L88	EL+JCB09151XX0
L89	EL+JCB09151XX0
L1	EL+JCB09152XX0
L2	EL+JCB09152XX0
L3	EL+JCB09152XX0
L16	EL+JCB09152XX0
L17	EL+JCB09152XX0
L18	EL+JCB09152XX0
L19	EL+JCB09152XX0
L20	EL+JCB09152XX0
L21	EL+JCB09152XX0
L22	EL+JCB09152XX0
L24	EL+JCB09152XX0
L25	EL+JCB09152XX0
L26	EL+JCB09152XX0
L27	EL+JCB09152XX0
L28	EL+JCB09152XX0
L29	EL+JCB09152XX0
L30	EL+JCB09152XX0
L31	EL+JCB09152XX0
L32	EL+JCB09152XX0
L34	EL+JCB09152XX0
L35	EL+JCB09152XX0
L40	EL+JCB09152XX0
L41	EL+JCB09152XX0
L42	EL+JCB09152XX0
L43	EL+JCB09152XX0
L53	EL+JCB09152XX0
L55	EL+JCB09152XX0
L56	EL+JCB09152XX0
L57	EL+JCB09152XX0
R9	ER+0RXX1
R14	ER+0RXX1
R26	ER+0RXX1
R29	ER+0RXX1
R36	ER+0RXX1
R107	ER+0RXX1
R110	ER+0RXX1
R111	ER+0RXX1
R153	ER+0RXX1
R156	ER+0RXX1
R157	ER+0RXX1
R163	ER+0RXX1
R165	ER+0RXX1

R173	ER+0RXX1
R174	ER+0RXX1
R187	ER+0RXX1
R188	ER+0RXX1
R189	ER+0RXX1
R191	ER+0RXX1
R192	ER+0RXX1
R193	ER+0RXX1
R207	ER+0RXX1
R209	ER+0RXX1
R210	ER+0RXX1
R211	ER+0RXX1
R214	ER+0RXX1
R215	ER+0RXX1
R216	ER+0RXX1
R223	ER+0RXX1
R224	ER+0RXX1
R228	ER+0RXX1
R230	ER+0RXX1
R8	ER+100K0.1WXXF
R12	ER+100K0.1WXXF
R13	ER+100K0.1WXXF
R55	ER+100K0.1WXXF
R71	ER+100K0.1WXXF
R72	ER+100K0.1WXXF
R73	ER+100K0.1WXXF
R74	ER+100K0.1WXXF
R112	ER+10K0.1WXXF
R46	ER+10R0.1WXXF
R47	ER+10R0.1WXXF
R51	ER+10R0.1WXXF
R94	ER+10R0.1WXXF
R102	ER+10R0.1WXXF
R106	ER+10R0.1WXXF
R109	ER+10R0.1WXXF
R113	ER+10R0.1WXXF
R114	ER+10R0.1WXXF
R119	ER+10R0.1WXXF
R121	ER+10R0.1WXXF
R122	ER+10R0.1WXXF
R124	ER+10R0.1WXXF
R125	ER+10R0.1WXXF
R126	ER+10R0.1WXXF
R132	ER+10R0.1WXXF
R134	ER+10R0.1WXXF
R139	ER+10R0.1WXXF
R141	ER+10R0.1WXXF
R146	ER+10R0.1WXXF
R159	ER+10R0.1WXXF
R160	ER+10R0.1WXXF
R161	ER+10R0.1WXXF
R164	ER+10R0.1WXXF
R166	ER+10R0.1WXXF
R168	ER+10R0.1WXXF
R169	ER+10R0.1WXXF
R176	ER+10R0.1WXXF
R178	ER+10R0.1WXXF
R179	ER+10R0.1WXXF
R180	ER+10R0.1WXXF
R39	ER+1K0.1WXXF
R43	ER+1K0.1WXXF
R60	ER+1K0.1WXXF
R7	ER+1M0.1WXXF
R200	ER+1M0.1WXXF
R201	ER+1M0.1WXXF
R202	ER+1M0.1WXXF
R203	ER+1M0.1WXXF
R217	ER+1M0.1WXXF
R220	ER+1M0.1WXXF
R227	ER+220R0.1WXXF
R15	ER+22K0.1WXXF
R75	ER+22R0.1WXXF
R1	ER+470R0.1WXXF
R2	ER+470R0.1WXXF
R3	ER+470R0.1WXXF
R4	ER+470R0.1WXXF
R5	ER+470R0.1WXXF
R6	ER+470R0.1WXXF
R18	ER+470R0.1WXXF
R21	ER+470R0.1WXXF
R22	ER+470R0.1WXXF
R23	ER+470R0.1WXXF
R24	ER+470R0.1WXXF
R25	ER+470R0.1WXXF
R28	ER+470R0.1WXXF
R40	ER+470R0.1WXXF
R45	ER+470R0.1WXXF
R48	ER+470R0.1WXXF
R58	ER+470R0.1WXXF
R61	ER+470R0.1WXXF
R63	ER+470R0.1WXXF
R65	ER+470R0.1WXXF
R66	ER+470R0.1WXXF
R67	ER+470R0.1WXXF
R68	ER+470R0.1WXXF
R69	ER+470R0.1WXXF
R76	ER+470R0.1WXXF
R78	ER+470R0.1WXXF
R79	ER+470R0.1WXXF
R80	ER+470R0.1WXXF
R81	ER+470R0.1WXXF
R82	ER+470R0.1WXXF
R85	ER+470R0.1WXXF
R86	ER+470R0.1WXXF
R87	ER+470R0.1WXXF
R99	ER+470R0.1WXXF
R115	ER+470R0.1WXXF
R116	ER+470R0.1WXXF
R118	ER+470R0.1WXXF
R129	ER+470R0.1WXXF
R133	ER+470R0.1WXXF
R135	ER+470R0.1WXXF
R137	ER+470R0.1WXXF
R138	ER+470R0.1WXXF
R142	ER+470R0.1WXXF
R143	ER+470R0.1WXXF
R144	ER+470R0.1WXXF
R145	ER+470R0.1WXXF
R148	ER+470R0.1WXXF
R149	ER+470R0.1WXXF
R152	ER+470R0.1WXXF
R175	ER+470R0.1WXXF
R181	ER+470R0.1WXXF
R182	ER+470R0.1WXXF
R183	ER+470R0.1WXXF
R184	ER+470R0.1WXXF
R185	ER+470R0.1WXXF
R194	ER+470R0.1WXXF
R195	ER+470R0.1WXXF
R196	ER+470R0.1WXXF
R197	ER+470R0.1WXXF
R198	ER+470R0.1WXXF
R219	ER+470R0.1WXXF
R226	ER+470R0.1WXXF
R308	ER+470R0.1WXXF
R309	ER+470R0.1WXXF
R310	ER+470R0.1WXXF
R311	ER+470R0.1WXXF
R312	ER+470R0.1WXXF
R313	ER+470R0.1WXXF
R314	ER+470R0.1WXXF
R315	ER+470R0.1WXXF
R340	ER+470R0.1WXXF
R27	ER+47K0.1WXXF
R32	ER+47K0.1WXXF
R49	ER+47K0.1WXXF
R50	ER+47K0.1WXXF
R52	ER+47K0.1WXXF
R54	ER+47K0.1WXXF
R59	ER+47K0.1WXXF
R101	ER+47K0.1WXXF
R105	ER+47K0.1WXXF
R130	ER+47K0.1WXXF
R140	ER+47K0.1WXXF
R154	ER+47K0.1WXXF
R155	ER+47K0.1WXXF
R162	ER+47K0.1WXXF
R167	ER+47K0.1WXXF
R172	ER+47K0.1WXXF
R186	ER+47K0.1WXXF
R204	ER+47K0.1WXXF
R205	ER+47K0.1WXXF
R213	ER+47K0.1WXXF
R229	ER+47K0.1WXXF
R92	ER+47R0.1WXXF
R93	ER+47R0.1WXXF
R158	ER+47R0.1WXXF
R10	ER+4K70.1WXXF
R11	ER+4K70.1WXXF
R16	ER+4K70.1WXXF
R17	ER+4K70.1WXXF
R19	ER+4K70.1WXXF
R20	ER+4K70.1WXXF
R30	ER+4K70.1WXXF
R31	ER+4K70.1WXXF
R33	ER+4K70.1WXXF
R34	ER+4K70.1WXXF
R35	ER+4K70.1WXXF
R37	ER+4K70.1WXXF
R38	ER+4K70.1WXXF
R41	ER+4K70.1WXXF
R42	ER+4K70.1WXXF
R44	ER+4K70.1WXXF
R53	ER+4K70.1WXXF
R56	ER+4K70.1WXXF
R57	ER+4K70.1WXXF
R62	ER+4K70.1WXXF
R64	ER+4K70.1WXXF
R70	ER+4K70.1WXXF
R77	ER+4K70.1WXXF
R83	ER+4K70.1WXXF
R84	ER+4K70.1WXXF
R88	ER+4K70.1WXXF
R89	ER+4K70.1WXXF
R90	ER+4K70.1WXXF
R91	ER+4K70.1WXXF
R95	ER+4K70.1WXXF
R96	ER+4K70.1WXXF
R97	ER+4K70.1WXXF
R98	ER+4K70.1WXXF
R100	ER+4K70.1WXXF
R103	ER+4K70.1WXXF
R104	ER+4K70.1WXXF
R108	ER+4K70.1WXXF
R117	ER+4K70.1WXXF
R120	ER+4K70.1WXXF
R123	ER+4K70.1WXXF
R127	ER+4K70.1WXXF
R128	ER+4K70.1WXXF
R131	ER+4K70.1WXXF
R136	ER+4K70.1WXXF
R147	ER+4K70.1WXXF
R150	ER+4K70.1WXXF
R151	ER+4K70.1WXXF
R170	ER+4K70.1WXXF
R171	ER+4K70.1WXXF
R177	ER+4K70.1WXXF
R190	ER+4K70.1WXXF
R199	ER+4K70.1WXXF
R206	ER+4K70.1WXXF
R208	ER+4K70.1WXXF
R212	ER+4K70.1WXXF
R218	ER+4K70.1WXXF
R221	ER+4K70.1WXXF
R222	ER+4K70.1WXXF
R225	ER+4K70.1WXXF
RT1	ERT+KTY82220PH0
SW1	ESW+SMSG1241SC0
SW2	ESW+SMSG1241SC0
SW3	ESW+SMSG1241SC0
SW4	ESW+SMSG1241SC0
SW5	ESW+SMSG1241SC0
SW6	ESW+SMSG1241SC0
T2	ET+BC807-40XX0
T3	ET+BC817-40XX0
T4	ET+BC817-40XX0
T5	ET+BC817-40XX0
T6	ET+BC817-40XX0
T7	ET+BC817-40XX0
T8	ET+BC817-40XX0
T9	ET+BC817-40XX0
T10	ET+BC817-40XX0
T11	ET+BC817-40XX0
T16	ET+BC817-40XX0
T17	ET+BC817-40XX0
T1	ET+BCX52-16XX0
T14	ET+BCX52-16XX0
T12	ET+BSS138XX0
U5	EU+24LC256XX0
U7	EU+24LC256XX0
U8	EU+24LC256XX0
U4	EU+74HC04XX0
U10	EU+74HC11XX0
U20	EU+74HC74XX0
U9	EU+74HCT4053XX0
U15	EU+74LVC4245XX0
U16	EU+DS2401ZXX0
U14	EU+E28F320XX0

U21	EU+E28F320XX0
U2	EU+HD7729HI0
U18	EU+LM1117ADJXX0
U19	EU+MAX6318XX0
U12	EU+MCP120XX0
U17	EU+MT28F800BXX0
U3	EU+MT48LC1MXX0
U11	EU+MT48LC1MXX0
U1	EU+SED1374F0EP0
U13	EU+SED1386F0EP0
U6	EU-AT90L2343AT0
UX1	EUX+SG8002JFXX0
UX2	EUX+SG8002JFXX1
X2	EX+32.768KXX0
X1	EX+9.216MXX0

PCB POWER for
BTL-08 S ECG
BTL-08 SD ECG

CE870	ECE+10U35VXXM
CE871	ECE+10U35VXXM
CE2	ECE+47U35VXXM
CE3	ECE+47U35VXXM
CE4	ECE+47U35VXXM
CE8	ECE+47U35VXXM
CE11	ECE+47U35VXXM
CE12	ECE+47U35VXXM
CE13	ECE+47U35VXXM
CE14	ECE+47U35VXXM
CE1	ECE-2200U35VXXM
CE100	ECE-2200U35VXXM
CE5	ECE-330U35VXXM
CE6	ECE-330U35VXXM
CE9	ECE-330U35VXXM
CE10	ECE-330U35VXXM
CE15	ECE-330U35VXXM
CE120	ECE-330U35VXXM
CE121	ECE-330U35VXXM
CF800	ECF-47N275VXXM
CF801	ECF-47N275VXXM
CK2	ECK+100N50VXXZ
CK3	ECK+100N50VXXZ
CK4	ECK+100N50VXXZ
CK5	ECK+100N50VXXZ
CK6	ECK+100N50VXXZ
CK7	ECK+100N50VXXZ
CK10	ECK+100N50VXXZ
CK12	ECK+100N50VXXZ
CK650	ECK+100N50VXXZ
CK651	ECK+100N50VXXZ
CK653	ECK+100N50VXXZ
CK702	ECK+100N50VXXZ
CK11	ECK+10N50VXXZ
CK250	ECK+1N50VXXJ
CK13	ECK+3U316VXXZ
CK1	ECK-100N63VXXM
CK8	ECK-100N63VXXM
CK9	ECK-100N63VXXM
D3	ED-FR604XX0
DD1	EDD+BAV99XX0
DD2	EDD+BAV99XX0
DD3	EDD+BAV99XX0
DD4	EDD+BAV99XX0
DD5	EDD+BAV99XX0
DD6	EDD+BAV99XX0
DD870	EDD+BAV99XX0
DD871	EDD+BAV99XX0
DG1	EDG-KBU08BXX0
DL3	EDL+SMDGREENXX0
DS3	EDS+12CWQ06XX0
DS1	EDS+SS16XX0
DZ3	EDZ+BZX845V6XXJ
DZ251	EDZ+BZX845V6XXJ
DZ2	EDZ+BZX84C10XXJ
POJ3	EF-MST1.6ASC0
POJ2	EF-MST2.5ASC0
POJ200	EF-MST6.3ASC0
J3	EJ+52435-28MX0
J650	EJ+52435-28MX0
J250	EJ+JUMPERXX0
J4	EJ-5281-NA2MX0
J8	EJ-5281-NA4MX0
J1	EJ-89400-15XX0
J2	EJ-B02-VHJS0
J5	EJ-B02-VHJS0
J110	EJ-B02-VHJS0
J870	EJ-CAN9Z90XX0
J9	EJ-S1G2XX0
L4	EL+10U4AXX0
L5	EL+10U4AXX0
L3	EL+68U1.52AXX0
L680	EL+68U1.52AXX0
L1	EL+JCB09151XX0
L2	EL+JCB09151XX0
L650	EL+JCB09151XX0
L651	EL+JCB09151XX0
L653	EL+JCB09151XX0
L654	EL+JCB09151XX0
L655	EL+JCB09151XX0
L657	EL+JCB09151XX0
L662	EL+JCB09151XX0
L663	EL+JCB09151XX0
L800	EL-K5BR6H2.5XX0
L804	EL-K5BR6H2.5XX0
L802	EL-PMEC102/VXX0
L6	EL-PMEC10MXX0
O870	EO+H11L1VXX0
O871	EO+H11L1VXX0
POJ1	EPOJ-FPG5SC0
R4	ER+0RXX1
R15	ER+0RXX1
R3	ER+10K0.1WXXF
R27	ER+10K0.1WXXF
R28	ER+10K0.1WXXF
R212	ER+10K0.1WXXF
R213	ER+10K0.1WXXF
R25	ER+10R0.1WXXF
R26	ER+10R0.1WXXF
R29	ER+10R0.1WXXF
R10	ER+1K0.1WXXF
R22	ER+1K0.1WXXF
R870	ER+1K0.1WXXF
R11	ER+1M0.1WXXF
R20	ER+1M0.1WXXF
R21	ER+1M0.1WXXF
R13	ER+220K0.1WXXF
R14	ER+22K0.1WXXF
R250	ER+2K20.1WXXF
R1	ER+470R0.1WXXF
R16	ER+470R0.1WXXF
R17	ER+470R0.1WXXF
R18	ER+470R0.1WXXF
R23	ER+470R0.1WXXF
R32	ER+470R0.1WXXF
R304	ER+470R0.1WXXF
R663	ER+470R0.1WXXF
R664	ER+470R0.1WXXF
R665	ER+470R0.1WXXF
R666	ER+470R0.1WXXF
R667	ER+470R0.1WXXF
R681	ER+470R0.1WXXF
R682	ER+470R0.1WXXF
R684	ER+470R0.1WXXF
R872	ER+470R0.1WXXF
R874	ER+470R0.1WXXF
R6	ER+47K0.1WXXF
R9	ER+47K0.1WXXF
R251	ER+47R0.1WXXF
R668	ER+47R0.1WXXF
R2	ER+4K70.1WXXF
R5	ER+4K70.1WXXF
R7	ER+4K70.1WXXF
R8	ER+4K70.1WXXF
R12	ER+4K70.1WXXF
R19	ER+4K70.1WXXF
R24	ER+4K70.1WXXF
R30	ER+4K70.1WXXF
R31	ER+4K70.1WXXF
R300	ER+4K70.1WXXF
R683	ER+4K70.1WXXF
R730	ER+4K70.1WXXF
RL2	ERL-M3S06TXX0
RV800	ERV-ERZV14DXX0
SP250	ESP-KPE112XX0
SW800	ESW-00334604SC0
SW1	ESW-KSM632BXX0
T2	ET+BC807-40XX0
T4	ET+BC807-40XX0
T7	ET+BC807-40XX0
T251	ET+BC807-40XX0
T1	ET+BC817-40XX0
T6	ET+BC817-40XX0
T8	ET+BC817-40XX0
T9	ET+BC817-40XX0
T250	ET+BC817-40XX0
T681	ET+BC817-40XX0
T701	ET+BC817-40XX0
T301	ET+BCX52-16XX0
T680	ET+BCX52-16XX0
T3	ET+BSS138XX0
T5	ET+BSS138XX0
TR1	ETR-TOROID13TA1
U703	EU+74HCT04XX0
U2	EU+L4940XX0
U4	EU+LM25953.3XX0
U1	EU+LM2596ADJXX0
TP3	TEST_POINT
TP4	TEST_POINT
TP5	TEST_POINT
TP1	TP_GND_4.0MM
TP2	TP_GND_4.0MM

PCB POWER for
BTL-08 MD ECG
BTL-08 MT ECG

CE7	ECE+10U35VXXM
CE703	ECE+10U35VXXM
CE153	ECE+2.2U50VXXM
CE870	ECE+2.2U50VXXM
CE871	ECE+2.2U50VXXM
CE872	ECE+2.2U50VXXM
CE873	ECE+2.2U50VXXM
CE874	ECE+2.2U50VXXM
CE1	ECE+47U35VXXM
CE3	ECE+47U35VXXM
CE4	ECE+47U35VXXM
CE5	ECE+47U35VXXM
CE13	ECE+47U35VXXM
CE115	ECE-1000U35VXXM
CE800	ECE-1000U35VXXM
CE801	ECE-2200U35VXXM
CE802	ECE-2200U35VXXM
CE2	ECE-330U35VXXM
CE8	ECE-330U35VXXM
CE9	ECE-330U35VXXM
CE10	ECE-330U35VXXM
CE11	ECE-330U35VXXM
CE12	ECE-330U35VXXM
CE103	ECE-330U35VXXM
CE110	ECE-330U35VXXM
CE111	ECE-330U35VXXM
CE113	ECE-330U35VXXM
CE116	ECE-330U35VXXM
CE118	ECE-330U35VXXM
CE150	ECE-330U35VXXM
CE151	ECE-330U35VXXM
CE300	ECE-330U35VXXM
CE301	ECE-330U35VXXM
CE350	ECE-330U35VXXM
CE351	ECE-330U35VXXM
CE400	ECE-330U35VXXM
CE401	ECE-330U35VXXM
CF1	ECF-47N275VXXM
CF150	ECF-47N275VXXM
CF151	ECF-47N275VXXM
CF152	ECF-47N275VXXM
CF800	ECF-47N275VXXM
CF801	ECF-47N275VXXM
CK1	ECK+100N50VXXZ
CK2	ECK+100N50VXXZ
CK3	ECK+100N50VXXZ
CK4	ECK+100N50VXXZ
CK5	ECK+100N50VXXZ
CK6	ECK+100N50VXXZ
CK7	ECK+100N50VXXZ
CK8	ECK+100N50VXXZ
CK9	ECK+100N50VXXZ
CK10	ECK+100N50VXXZ
CK13	ECK+100N50VXXZ
CK14	ECK+100N50VXXZ
CK15	ECK+100N50VXXZ
CK17	ECK+100N50VXXZ
CK18	ECK+100N50VXXZ
CK19	ECK+100N50VXXZ
CK20	ECK+100N50VXXZ
CK21	ECK+100N50VXXZ
CK22	ECK+100N50VXXZ
CK23	ECK+100N50VXXZ

CK24	ECK+100N50VXXZ
CK25	ECK+100N50VXXZ
CK26	ECK+100N50VXXZ
CK27	ECK+100N50VXXZ
CK101	ECK+100N50VXXZ
CK110	ECK+100N50VXXZ
CK151	ECK+100N50VXXZ
CK300	ECK+100N50VXXZ
CK350	ECK+100N50VXXZ
CK550	ECK+100N50VXXZ
CK551	ECK+100N50VXXZ
CK552	ECK+100N50VXXZ
CK555	ECK+100N50VXXZ
CK650	ECK+100N50VXXZ
CK702	ECK+100N50VXXZ
CK704	ECK+100N50VXXZ
CK705	ECK+100N50VXXZ
CK709	ECK+100N50VXXZ
CK710	ECK+100N50VXXZ
CK804	ECK+100N50VXXZ
CK850	ECK+100N50VXXZ
CK870	ECK+100N50VXXZ
CK104	ECK+100P50VXXJ
CK105	ECK+100P50VXXJ
CK16	ECK+10N50VXXZ
CK11	ECK+1N50VXXJ
CK12	ECK+1N50VXXJ
CK102	ECK+1N50VXXJ
CK103	ECK+1N50VXXJ
CK107	ECK+1N50VXXJ
CK109	ECK+1N50VXXJ
CK111	ECK+1N50VXXJ
CK150	ECK+1N50VXXJ
CK152	ECK+1N50VXXJ
CK250	ECK+1N50VXXJ
CK400	ECK+1N50VXXJ
CK553	ECK+1N50VXXJ
CK554	ECK+1N50VXXJ
CK700	ECK+22P50VXXJ
CK701	ECK+22P50VXXJ
CE6	ECK+3U316VXXZ
CK401	ECK+47P50VXXJ
CK800	ECK-100P500VXXK
CK801	ECK-100P500VXXK
CK802	ECK-100P500VXXK
CK803	ECK-100P500VXXK
D2	ED+US1G400VXX0
D3	ED-FR604XX0
DD1	EDD+BAV99XX0
DD2	EDD+BAV99XX0
DD3	EDD+BAV99XX0
DD102	EDD+BAV99XX0
DD150	EDD+BAV99XX0
DD400	EDD+BAV99XX0
DD850	EDD+BAV99XX0
DD851	EDD+BAV99XX0
DD852	EDD+BAV99XX0
DD853	EDD+BAV99XX0
DD854	EDD+BAV99XX0
DD855	EDD+BAV99XX0
DM800	EDG-KBU08BXX0
DL3	EDL+SMDGREENXX0
DS3	EDS+12CWQ06XX0
DS100	EDS+12CWQ06XX0
DS1	EDS+SS16XX0
DS150	EDS+SS16XX0
DS300	EDS+SS16XX0
DS350	EDS+SS16XX0
DS400	EDS+SS16XX0
DZ1	EDZ+BZX845V6XXJ
DZ2	EDZ+BZX845V6XXJ
DZ150	EDZ+BZX845V6XXJ
DZ551	EDZ+BZX845V6XXJ
DZ552	EDZ+BZX845V6XXJ
DZ3	EDZ+BZX84C10XXJ
DZ250	EDZ+BZX84C10XXJ
DZ870	EDZ+BZX84C10XXJ
DZ871	EDZ+BZX84C10XXJ
DZ872	EDZ+BZX84C10XXJ
DZ873	EDZ+BZX84C10XXJ
DZ874	EDZ+BZX84C10XXJ
DZ875	EDZ+BZX84C10XXJ
F1	EF-MST1.6ASC0
F801	EF-MST2.5ASC0
F200	EF-MST6.3ASC0
J3	EJ+52435-28MX0
J700	EJ+6504-34P2XX0
J5	EJ+JUMPERXX0
J521	EJ-52044-14MX0
J800	EJ-5281-NA2MX0
J801	EJ-5281-NA4MX0
J2	EJ-89400-15XX0
J501	EJ-89400-15XX0
J550	EJ-89400-15XX0
J200	EJ-B02-VHJS0
J802	EJ-B02-VHJS0
J850	EJ-CAN9V90XX0
J870	EJ-CAN9Z90XX0
J1	EJ-S1G2XX0
J4	EJ-S1G2XX0
J150	EJ-S1G4XX0
L5	EL+10U4AXX0
L6	EL+10U4AXX0
L100	EL+10U4AXX0
L101	EL+10U4AXX0
L102	EL+10U4AXX0
L151	EL+220U0.66AXX0
L400	EL+220U0.66AXX0
L150	EL+68U1.52AXX0
L350	EL+68U1.52AXX0
L680	EL+68U1.52AXX0
L1	EL+JCB09151XX0
L2	EL+JCB09151XX0
L3	EL+JCB09151XX0
L7	EL+JCB09151XX0
L8	EL+JCB09151XX0
L500	EL+JCB09151XX0
L504	EL+JCB09151XX0
L505	EL+JCB09151XX0
L550	EL+JCB09151XX0
L551	EL+JCB09151XX0
L650	EL+JCB09151XX0
L651	EL+JCB09151XX0
L652	EL+JCB09151XX0
L653	EL+JCB09151XX0
L654	EL+JCB09151XX0
L655	EL+JCB09151XX0
L656	EL+JCB09151XX0
L657	EL+JCB09151XX0
L659	EL+JCB09151XX0
L660	EL+JCB09151XX0
L661	EL+JCB09151XX0
L662	EL+JCB09151XX0
L663	EL+JCB09151XX0
L681	EL+JCB09151XX0
L701	EL+JCB09151XX0
L708	EL+JCB09151XX0
L709	EL+JCB09151XX0
L719	EL+JCB09151XX0
L720	EL+JCB09151XX0
L850	EL+JCB09151XX0
L800	EL-K5BR6H2.5XX0
L801	EL-K5BR6H2.5XX0
L803	EL-K5BR6H2.5XX0
L804	EL-K5BR6H2.5XX0
L802	EL-PMEC102/VXX0
L4	EL-PMEC10MXX0
O870	EO+H11L1VXX0
O871	EO+H11L1VXX0
POJ2	EPOJ-FPG5SC0
R677	ER+0RXX1
R18	ER+100K0.1WXXF
R104	ER+100K0.1WXXF
R105	ER+100K0.1WXXF
R116	ER+100K0.1WXXF
R213	ER+100K0.1WXXF
R401	ER+100K0.1WXXF
R578	ER+100K0.1WXXF
R582	ER+100K0.1WXXF
R729	ER+100K0.1WXXF
R7	ER+100R0.1WXXF
R12	ER+100R0.1WXXF
R14	ER+100R0.1WXXF
R114	ER+100R0.1WXXF
R118	ER+100R0.1WXXF
R119	ER+100R0.1WXXF
R131	ER+100R0.1WXXF
R163	ER+100R0.1WXXF
R664	ER+100R0.1WXXF
R668	ER+100R0.1WXXF
R704	ER+100R0.1WXXF
R705	ER+100R0.1WXXF
R706	ER+100R0.1WXXF
R707	ER+100R0.1WXXF
R716	ER+100R0.1WXXF
R717	ER+100R0.1WXXF
R718	ER+100R0.1WXXF
R737	ER+100R0.1WXXF
R738	ER+100R0.1WXXF
R17	ER+10K0.1WXXF
R21	ER+10K0.1WXXF
R26	ER+10K0.1WXXF
R27	ER+10K0.1WXXF
R29	ER+10K0.1WXXF
R30	ER+10K0.1WXXF
R101	ER+10K0.1WXXF
R107	ER+10K0.1WXXF
R108	ER+10K0.1WXXF
R110	ER+10K0.1WXXF
R117	ER+10K0.1WXXF
R128	ER+10K0.1WXXF
R133	ER+10K0.1WXXF
R162	ER+10K0.1WXXF
R403	ER+10K0.1WXXF
R550	ER+10K0.1WXXF
R579	ER+10K0.1WXXF
R580	ER+10K0.1WXXF
R581	ER+10K0.1WXXF
R583	ER+10K0.1WXXF
R866	ER+10K0.1WXXF
R867	ER+10K0.1WXXF
R868	ER+10K0.1WXXF
R9	ER+10R0.1WXXF
R25	ER+10R0.1WXXF
R33	ER+10R0.1WXXF
R34	ER+10R0.1WXXF
R35	ER+10R0.1WXXF
R410	ER+10R0.1WXXF
R1	ER+1K0.1WXXF
R2	ER+1K0.1WXXF
R28	ER+1K0.1WXXF
R32	ER+1K0.1WXXF
R37	ER+1K0.1WXXF
R102	ER+1K0.1WXXF
R106	ER+1K0.1WXXF
R134	ER+1K0.1WXXF
R155	ER+1K0.1WXXF
R156	ER+1K0.1WXXF
R301	ER+1K0.1WXXF
R575	ER+1K0.1WXXF
R576	ER+1K0.1WXXF
R742	ER+1K0.1WXXF
R36	ER+1M0.1WXXF
R38	ER+1M0.1WXXF
R571	ER+1R0.1WXXJ
R572	ER+1R0.1WXXJ
R573	ER+1R0.1WXXJ
R574	ER+1R0.1WXXJ
R5	ER+220K0.1WXXF
R3	ER+22K0.1WXXF
R24	ER+22K0.1WXXF
R112	ER+22K0.1WXXF
R151	ER+22K0.1WXXF
R173	ER+22K0.1WXXF
R406	ER+22K0.1WXXF
R408	ER+22K0.1WXXF
R558	ER+22K0.1WXXF
R559	ER+22K0.1WXXF
R4	ER+22K1WXXJ
R109	ER+22R0.1WXXF
R139	ER+22R0.1WXXF
R153	ER+2K20.1WXXF
R250	ER+2K20.1WXXF
R415	ER+2K20.1WXXF
R416	ER+2K20.1WXXF
R870	ER+2K20.1WXXF
R10	ER+470K0.1WXXF
R11	ER+470K0.1WXXF
R22	ER+470K0.1WXXF
R115	ER+470K0.1WXXF
R23	ER+470R0.1WXXF
R47	ER+470R0.1WXXF
R48	ER+470R0.1WXXF
R50	ER+470R0.1WXXF
R111	ER+470R0.1WXXF
R150	ER+470R0.1WXXF
R404	ER+470R0.1WXXF
R413	ER+470R0.1WXXF

R500	ER+470R0.1WXXF
R501	ER+470R0.1WXXF
R502	ER+470R0.1WXXF
R503	ER+470R0.1WXXF
R508	ER+470R0.1WXXF
R521	ER+470R0.1WXXF
R552	ER+470R0.1WXXF
R555	ER+470R0.1WXXF
R560	ER+470R0.1WXXF
R570	ER+470R0.1WXXF
R658	ER+470R0.1WXXF
R660	ER+470R0.1WXXF
R661	ER+470R0.1WXXF
R662	ER+470R0.1WXXF
R663	ER+470R0.1WXXF
R665	ER+470R0.1WXXF
R667	ER+470R0.1WXXF
R669	ER+470R0.1WXXF
R670	ER+470R0.1WXXF
R681	ER+470R0.1WXXF
R682	ER+470R0.1WXXF
R684	ER+470R0.1WXXF
R715	ER+470R0.1WXXF
R721	ER+470R0.1WXXF
R722	ER+470R0.1WXXF
R723	ER+470R0.1WXXF
R724	ER+470R0.1WXXF
R863	ER+470R0.1WXXF
R864	ER+470R0.1WXXF
R865	ER+470R0.1WXXF
R871	ER+470R0.1WXXF
R872	ER+470R0.1WXXF
RX725	ER+470R0.1WXXF
RX726	ER+470R0.1WXXF
R45	ER+47K0.1WXXF
R46	ER+47K0.1WXXF
R103	ER+47K0.1WXXF
R152	ER+47K0.1WXXF
R154	ER+47K0.1WXXF
R168	ER+47K0.1WXXF
R212	ER+47K0.1WXXF
R407	ER+47K0.1WXXF
R551	ER+47K0.1WXXF
R556	ER+47K0.1WXXF
R557	ER+47K0.1WXXF
R568	ER+47K0.1WXXF
R577	ER+47K0.1WXXF
R584	ER+47K0.1WXXF
R585	ER+47K0.1WXXF
R586	ER+47K0.1WXXF
R31	ER+47R0.1WXXF
R40	ER+47R0.1WXXF
R41	ER+47R0.1WXXF
R42	ER+47R0.1WXXF
R43	ER+47R0.1WXXF
R44	ER+47R0.1WXXF
R88	ER+47R0.1WXXF
R251	ER+47R0.1WXXF
R6	ER+4K70.1WXXF
R8	ER+4K70.1WXXF
R13	ER+4K70.1WXXF
R15	ER+4K70.1WXXF
R16	ER+4K70.1WXXF
R19	ER+4K70.1WXXF
R20	ER+4K70.1WXXF
R158	ER+4K70.1WXXF
R159	ER+4K70.1WXXF
R160	ER+4K70.1WXXF
R161	ER+4K70.1WXXF
R402	ER+4K70.1WXXF
R405	ER+4K70.1WXXF
R417	ER+4K70.1WXXF
R554	ER+4K70.1WXXF
R666	ER+4K70.1WXXF
R683	ER+4K70.1WXXF
R727	ER+4K70.1WXXF
R728	ER+4K70.1WXXF
R730	ER+4K70.1WXXF
R733	ER+4K70.1WXXF
R739	ER+4K70.1WXXF
R740	ER+4K70.1WXXF
R754	ER+4K70.1WXXF
R788	ER+4K70.1WXXF
R858	ER+4K70.1WXXF
R411	ER+4R70.1WXXJ
R120	ER-0.16R0.6WXX0
R121	ER-0.16R0.6WXX0
R122	ER-0.16R0.6WXX0
R123	ER-0.16R0.6WXX0
R124	ER-0.16R0.6WXX0
RV800	ERV-ERZV14DXX0
SP1	ESP-KPE112XX0
SW800	ESW-00334604SC0
SW1	ESW-KSM632BXX0
T5	ET+BC807-40XX0
T103	ET+BC807-40XX0
T400	ET+BC807-40XX0
T1	ET+BC817-40XX0
T2	ET+BC817-40XX0
T3	ET+BC817-40XX0
T7	ET+BC817-40XX0
T150	ET+BC817-40XX0
T154	ET+BC817-40XX0
T252	ET+BC817-40XX0
T681	ET+BC817-40XX0
T701	ET+BC817-40XX0
T104	ET+BCX52-16XX0
T151	ET+BCX52-16XX0
T152	ET+BCX52-16XX0
T401	ET+BCX52-16XX0
T680	ET+BCX52-16XX0
T4	ET+BSS138XX0
T6	ET+BSS138XX0
T101	ET+IRF9540XX0
T301	ET+IRF9540XX0
T102	ET-IRF540XX0
TR2	ETR-1-1-8PXX0
TR150	ETR-300V-8PXX0
TR1	ETR-TOROID13TA1
U553	EU+4051XX0
U704	EU+74HC165XX0
U1	EU+74HCT04XX0
U703	EU+74HCT04XX0
U705	EU+74HCT4053XX0
U650	EU+74LVC4245XX0
U700	EU+89C52-24AT1
U150	EU+LM25953.3XX0
U350	EU+LM25953.3XX0
U300	EU+LM25955.0XX0
U2	EU+LM2596ADJXX0
U3	EU+ST232CDXX0
U401	EU+TL431XX0
U550	EU+TLC274CDXX0
U100	EU+UC3845XX0
U552	EU+UDN2916XX0
X700	EX+22.118MXX0
TP1	TEST_POINT
TP2	TEST_POINT
TP3	TEST_POINT
TP4	TEST_POINT
TP5	TEST_POINT
SZ7	TP_GND_4.0MM
SZ23	TP_GND_4.0MM

PCB ANALOG

CE3	ECE+10U35VXXM
CE4	ECE+10U35VXXM
CE5	ECE+10U35VXXM
CE8	ECE+10U35VXXM
CE9	ECE+10U35VXXM
CE11	ECE+10U35VXXM
CE452	ECE+10U35VXXM
CE454	ECE+10U35VXXM
CE500	ECE+10U35VXXM
CE701	ECE+10U35VXXM
CE1	ECE+2.2U50VXXM
CE12	ECE+2.2U50VXXM
CE6	ECE+47U35VXXM
CE7	ECE+47U35VXXM
CE10	ECE+47U35VXXM
CE400	ECE+47U35VXXM
CE401	ECE+47U35VXXM
CE450	ECE+47U35VXXM
CE451	ECE+47U35VXXM
CE453	ECE+47U35VXXM
CE470	ECE+47U35VXXM
CE700	ECE+47U35VXXM
CE702	ECE+47U35VXXM
CK2	ECK+100N50VXXZ
CK5	ECK+100N50VXXZ
CK6	ECK+100N50VXXZ
CK9	ECK+100N50VXXZ
CK151	ECK+100N50VXXZ
CK152	ECK+100N50VXXZ
CK332	ECK+100N50VXXZ
CK336	ECK+100N50VXXZ
CK337	ECK+100N50VXXZ
CK450	ECK+100N50VXXZ
CK451	ECK+100N50VXXZ
CK454	ECK+100N50VXXZ
CK455	ECK+100N50VXXZ
CK470	ECK+100N50VXXZ
CK471	ECK+100N50VXXZ
CK472	ECK+100N50VXXZ
CK502	ECK+100N50VXXZ
CK702	ECK+100N50VXXZ
CK703	ECK+100N50VXXZ
CK705	ECK+100N50VXXZ
CK730	ECK+100N50VXXZ
CK731	ECK+100N50VXXZ
CK740	ECK+100N50VXXZ
CK741	ECK+100N50VXXZ
CK200N	ECK+100N50VXXZ
CK200P	ECK+100N50VXXZ
CK201N	ECK+100N50VXXZ
CK201P	ECK+100N50VXXZ
CK202N	ECK+100N50VXXZ
CK202P	ECK+100N50VXXZ
CK203N	ECK+100N50VXXZ
CK203P	ECK+100N50VXXZ
CK300N	ECK+100N50VXXZ
CK300P	ECK+100N50VXXZ
CK300P5	ECK+100N50VXXZ
CK301N	ECK+100N50VXXZ
CK301P	ECK+100N50VXXZ
CK303N	ECK+100N50VXXZ
CK303P	ECK+100N50VXXZ
CK304N	ECK+100N50VXXZ
CK304P	ECK+100N50VXXZ
CK305N	ECK+100N50VXXZ
CK305P	ECK+100N50VXXZ
CK500N	ECK+100N50VXXZ
CK500P	ECK+100N50VXXZ
CK501N	ECK+100N50VXXZ
CK501P	ECK+100N50VXXZ
CK502P	ECK+100N50VXXZ
CK503P	ECK+100N50VXXZ
CK504N	ECK+100N50VXXZ
CK504P	ECK+100N50VXXZ
CK3	ECK+100P50VXXJ
CK4	ECK+100P50VXXJ
CK223	ECK+100P50VXXJ
CK225	ECK+100P50VXXJ
CK224	ECK+10N50VXXZ
CK333	ECK+10N50VXXZ
CK7	ECK+1N50VXXJ
CK17	ECK+1N50VXXJ
CK20	ECK+1N50VXXJ
CK21	ECK+1N50VXXJ
CK24	ECK+1N50VXXJ
CK26	ECK+1N50VXXJ
CK27	ECK+1N50VXXJ
CK28	ECK+1N50VXXJ
CK29	ECK+1N50VXXJ
CK30	ECK+1N50VXXJ
CK31	ECK+1N50VXXJ
CK32	ECK+1N50VXXJ
CK200	ECK+1N50VXXJ
CK201	ECK+1N50VXXJ
CK210	ECK+1N50VXXJ
CK211	ECK+1N50VXXJ
CK220	ECK+1N50VXXJ
CK221	ECK+1N50VXXJ
CK222	ECK+1N50VXXJ
CK240	ECK+1N50VXXJ
CK241	ECK+1N50VXXJ
CK250	ECK+1N50VXXJ
CK251	ECK+1N50VXXJ
CK260	ECK+1N50VXXJ
CK261	ECK+1N50VXXJ
CK270	ECK+1N50VXXJ
CK271	ECK+1N50VXXJ
CK280	ECK+1N50VXXJ
CK281	ECK+1N50VXXJ
CK290	ECK+1N50VXXJ
CK291	ECK+1N50VXXJ
CK334	ECK+1N50VXXJ
CK338	ECK+1N50VXXJ

CK339	ECK+1N50VXXJ
CK402	ECK+1N50VXXJ
CK404	ECK+1N50VXXJ
CK500	ECK+1N50VXXJ
CK10	ECK+220P50VXXJ
CK12	ECK+220P50VXXJ
CK300	ECK+220P50VXXJ
CK310	ECK+220P50VXXJ
CK320	ECK+220P50VXXJ
CK330	ECK+220P50VXXJ
CK340	ECK+220P50VXXJ
CK350	ECK+220P50VXXJ
CK360	ECK+220P50VXXJ
CK370	ECK+220P50VXXJ
CK380	ECK+220P50VXXJ
CK390	ECK+220P50VXXJ
CK700	ECK+22P50VXXJ
CK701	ECK+22P50VXXJ
CK302	ECK+3U316VXXZ
CK322	ECK+3U316VXXZ
CK342	ECK+3U316VXXZ
CK352	ECK+3U316VXXZ
CK362	ECK+3U316VXXZ
CK372	ECK+3U316VXXZ
CK382	ECK+3U316VXXZ
CK392	ECK+3U316VXXZ
CK1	ECK+470P50VXXJ
CK335	ECK+470P50VXXJ
CK403	ECK+470P50VXXJ
CK405	ECK+470P50VXXJ
CK406	ECK+470P50VXXJ
CK407	ECK+470P50VXXJ
CK408	ECK+470P50VXXJ
CK409	ECK+470P50VXXJ
CK331	ECK-1N500VXXM
DD2	EDD+BAV99XX0
DD3	EDD+BAV99XX0
DD220	EDD+BAV99XX0
DD330	EDD+BAV99XX0
DD331	EDD+BAV99XX0
DD400	EDD+BAV99XX0
DD401	EDD+BAV99XX0
DD450	EDD+BAV99XX0
DD451	EDD+BAV99XX0
DD453	EDD+BAV99XX0
DD454	EDD+BAV99XX0
DD501	EDD+BAV99XX0
DL1	EDL-3MMGREENXX0
DL2	EDL-3MMGREENXX0
DL3	EDL-3MMGREENXX0
DL5	EDL-3MMGREENXX0
DL6	EDL-3MMGREENXX0
DL7	EDL-3MMGREENXX0
DL4	EDL-3MMYELOWXX0
DL8	EDL-3MMYELOWXX0
DZ1	EDZ+BZX845V6XXJ
DZ3	EDZ+BZX845V6XXJ
DZ4	EDZ+BZX845V6XXJ
DZ5	EDZ+BZX845V6XXJ
DZ330	EDZ+BZX845V6XXJ
DZ331	EDZ+BZX845V6XXJ
DZ450	EDZ+BZX84C10XXJ
DZ451	EDZ+BZX84C10XXJ
J3	EJ+6504-34P2XX0
J1	EJ+JUMPERXX0
J6	EJ+JUMPERXX0
J2	EJ-89400-15XX0
J4	EJ-MLW20GXX0
J5	EJ-S1G2XX0
J8	EJ-S1G4XX0
L1	EL+JCB09151XX0
L2	EL+JCB09151XX0
L3	EL+JCB09151XX0
L4	EL+JCB09151XX0
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L472	EL+JCB09151XX0
L473	EL+JCB09151XX0
L474	EL+JCB09151XX0
L500	EL+JCB09151XX0
L700	EL+JCB09151XX0
L701	EL+JCB09151XX0
L330	EL+JCB09152XX0
L331	EL+JCB09152XX0
L332	EL+JCB09152XX0
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O741	EO+H11N1XX0
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R306	ER+100K0.1WXXB
R316	ER+100K0.1WXXB
R326	ER+100K0.1WXXB
R329	ER+100K0.1WXXB
R346	ER+100K0.1WXXB
R356	ER+100K0.1WXXB
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R229	ER+100K0.1WXXF
R401	ER+100K0.1WXXF
R406	ER+100K0.1WXXF
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R713	ER+100K0.1WXXF
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R382	ER+10K0.1WXXF
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R501	ER+10K0.1WXXF
R334	ER+10M0.1WXXJ
R400	ER+10R0.1WXXF
R2	ER+1K0.1WXXF
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R4	ER+1K0.1WXXF
R5	ER+1K0.1WXXF
R6	ER+1K0.1WXXF
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R734	ER+1K0.1WXXF
R740	ER+1K0.1WXXF
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R20	ER+1M0.1WXXF
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R251	ER+1M0.1WXXF
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R291	ER+1M0.1WXXF
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R36	ER+22K0.1WXXF
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R40	ER+22K0.1WXXF
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R35	ER+2K20.1WXXF
R230	ER+2K20.1WXXF
R232	ER+2K20.1WXXF
R502	ER+2K20.1WXXF
R300	ER+330M0.1WXXJ
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R320	ER+330M0.1WXXJ
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R350	ER+330M0.1WXXJ
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R19	ER+4K70.1WXXF
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R503	ER+4K70.1WXXF
R516	ER+4K70.1WXXF
R732	ER+4M70.1WXXJ
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T400	ET+BC807-40XX0
T401	ET+BC807-40XX0
T500	ET+BC807-40XX0
T730	ET+BC807-40XX0
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T390	ET+BC847BPNXX0
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T13	ET+BCX55-16XX0
T402	ET+BCX55-16XX0
T403	ET+BCX55-16XX0
TR2	ETR-5-7V-10PXX0
TR1	ETR-TOROIDFETA0
U500	EU+4051XX0
U501	EU+4051XX0
U200	EU+4066XX0
U202	EU+4066XX0
U700	EU+89C52-24AT1
U503	EU+HCPL0870XX0
U1	EU+LM1117ADJXX0
U701	EU+MAX805LXX0
U201	EU+TL034CXX0
U203	EU+TL034CXX0
U300	EU+TL034CXX0
U301	EU+TL034CXX0
U303	EU+TL034CXX0
U304	EU+TL034CXX0
U305	EU+TL034CXX0
U504	EU+TL034CXX0
U502	EU-HCPL7860XX0
X700	EX+22.118MXX0
TP1	TEST_POINT_0.7/1.1
TP2	TEST_POINT_0.7/1.1
TP3	TEST_POINT_0.7/1.1
TP4	TEST_POINT_0.7/1.1
TP5	TEST_POINT_0.7/1.1
TP7	TEST_POINT_0.7/1.1
TP8	TEST_POINT_0.7/1.1
TP9	TEST_POINT_0.7/1.1
TP10	TEST_POINT_0.7/1.1
TP11	TEST_POINT_0.7/1.1
TP12	TEST_POINT_0.7/1.1
TP13	TEST_POINT_0.7/1.1
TP15	TEST_POINT_0.7/1.1
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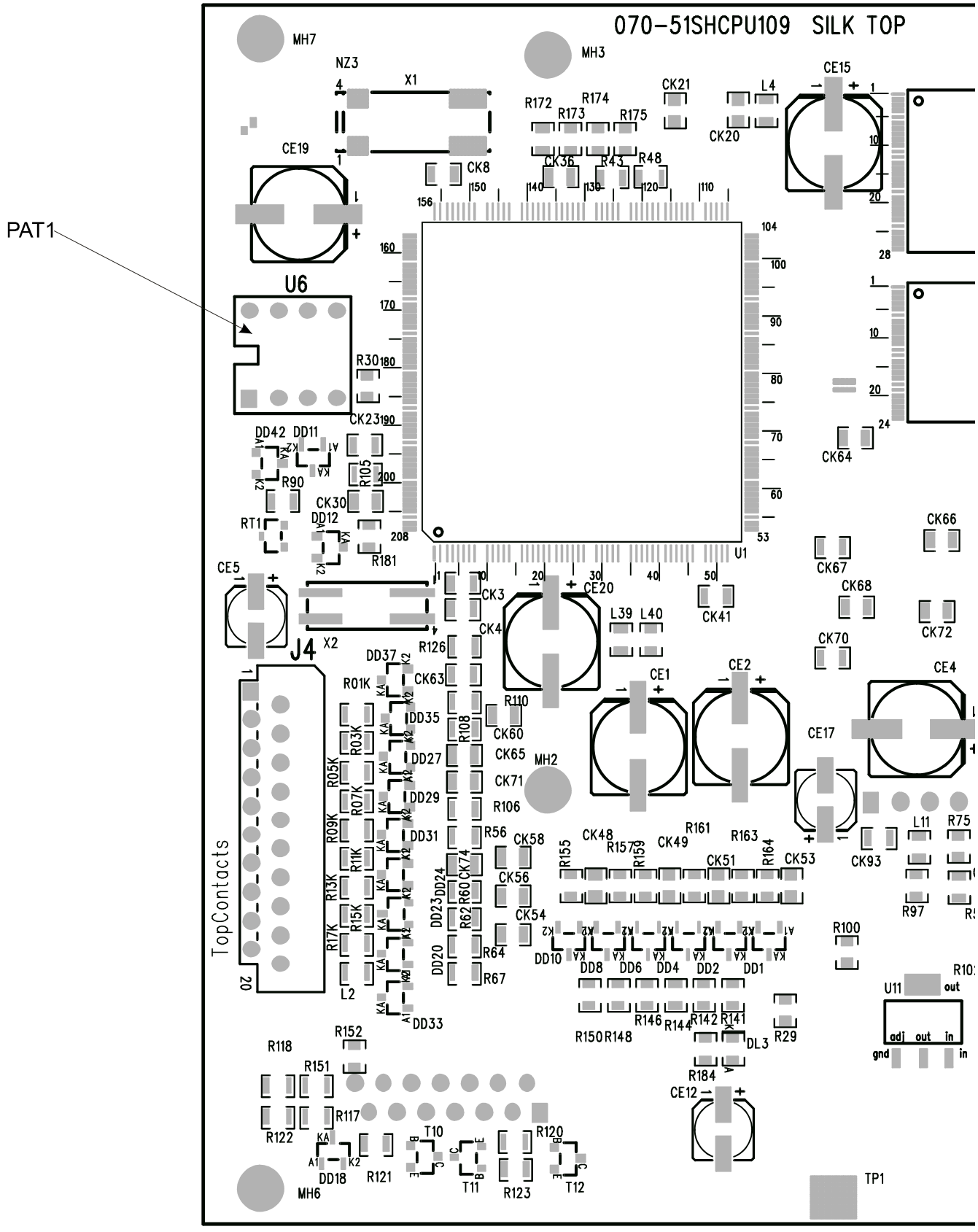
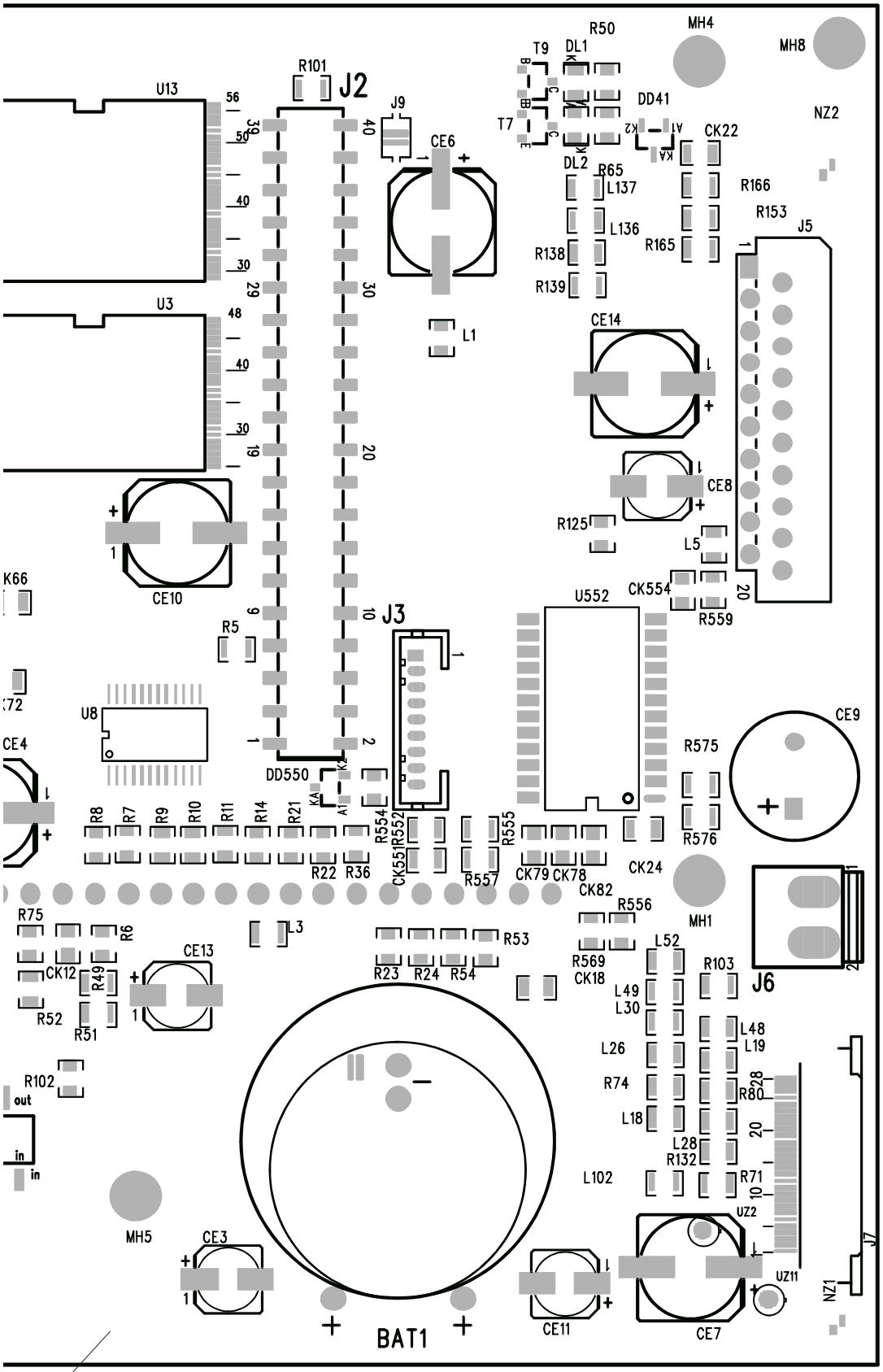
TP14	TP_GND_4.0MM



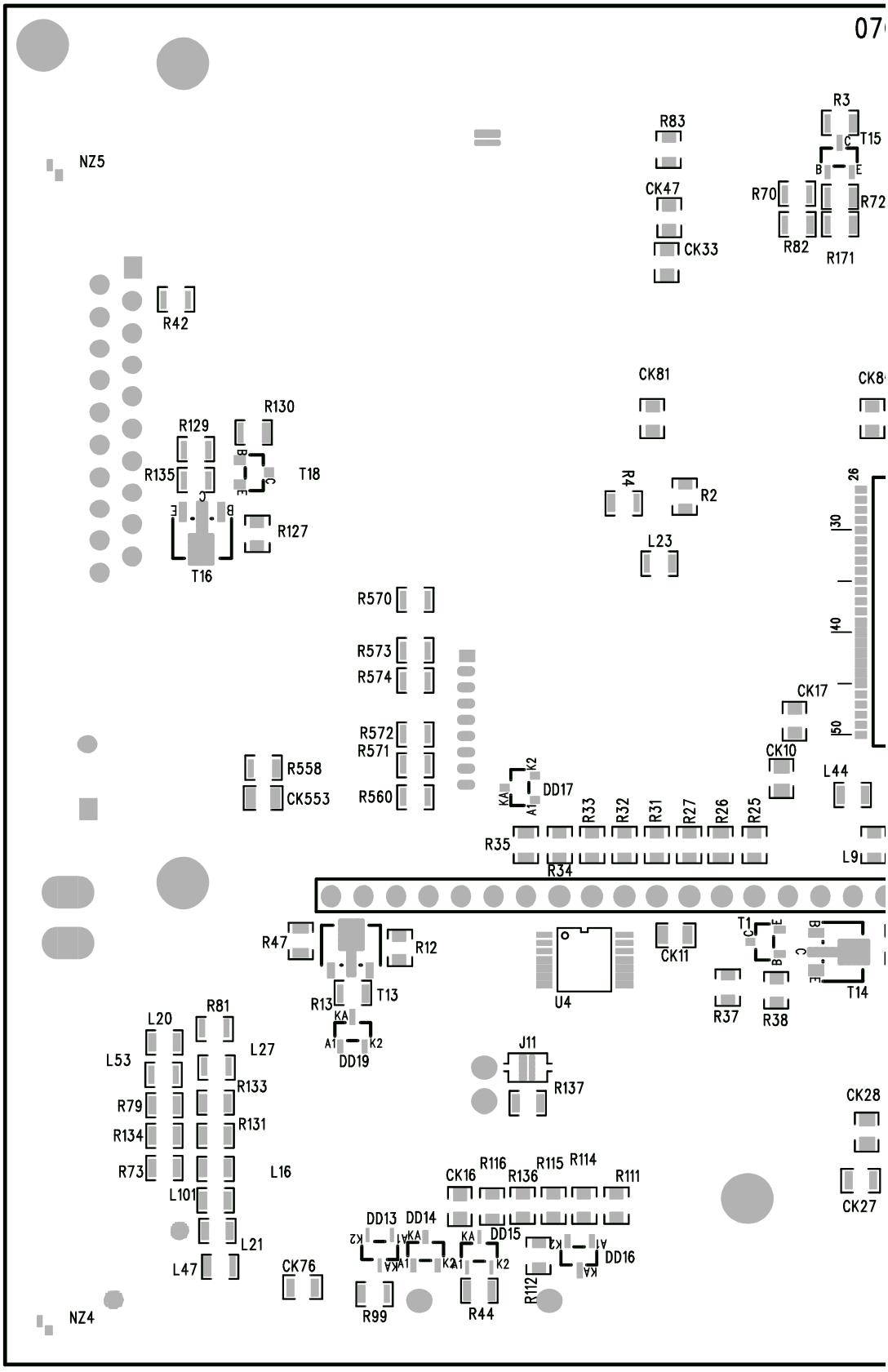
Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Púv. verze: Previous ver.:
V1	**věcná změna**	BJ25/02/2002	LP25/02/2002	TD25/02/2002	108z1
z1	**doplněn R94 na pozioci T17**	BJ17/06/2002	AM16/07/2002	TD16/07/2002	109

Název výrobku: Product name:	**DPS osazený**			
Medical Technologies	Kreslil: Drown by: **BJ20/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP20/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD20/09/2001**	List: Sheet: **1** z of **5**	Číslo výkresu: Sheet number: **070-52shcpu109z1**	

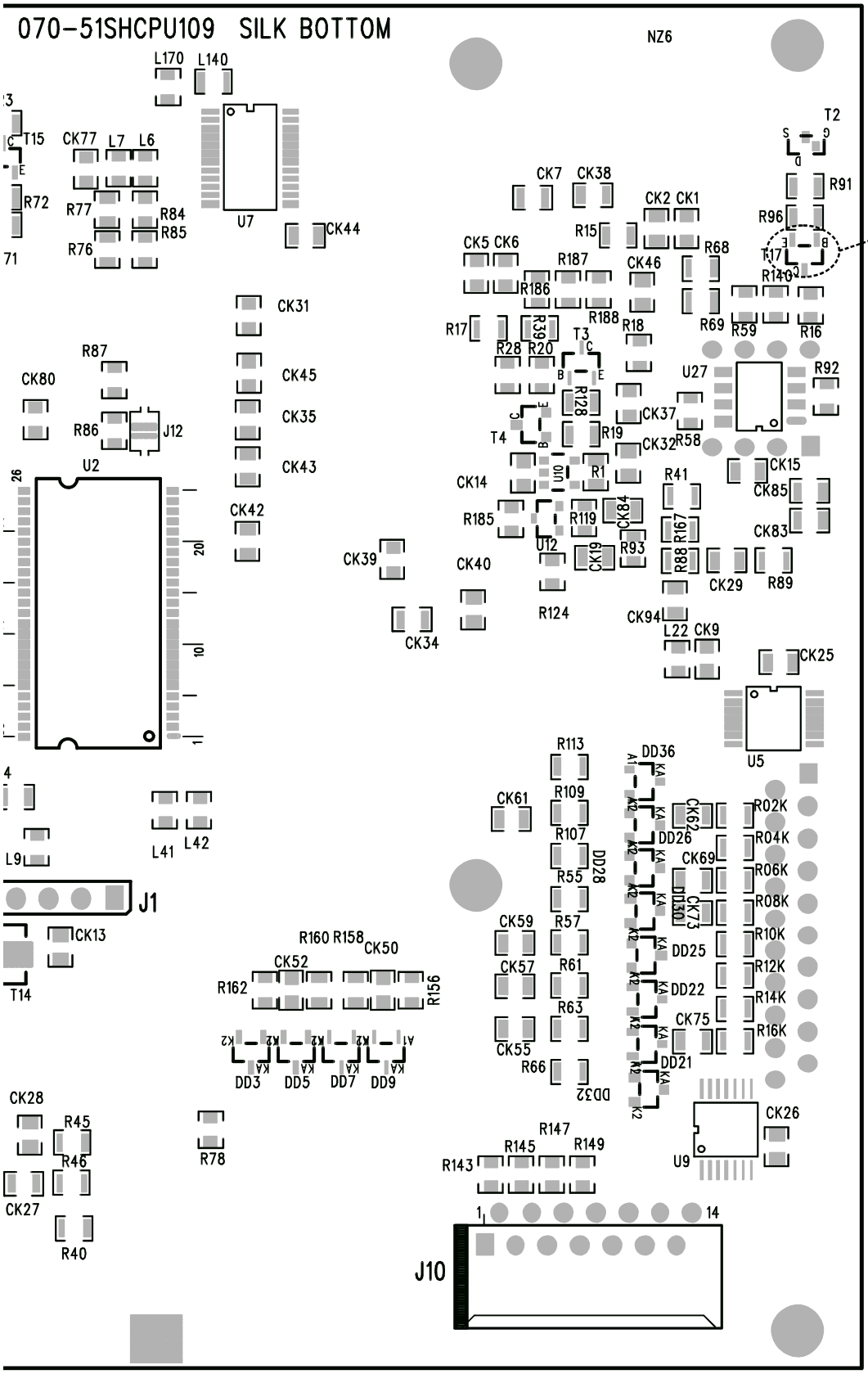
MEC1



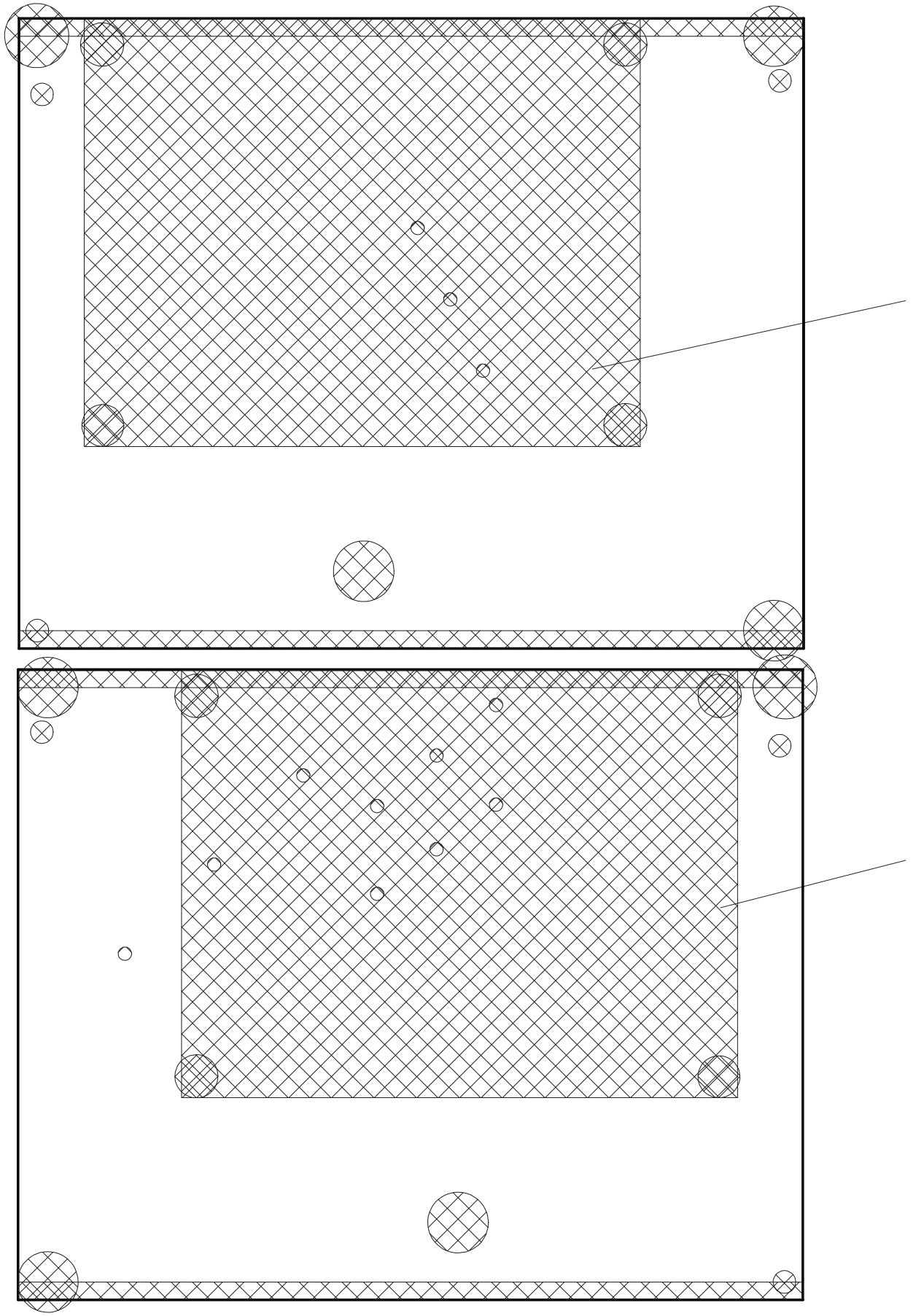
Název výrobku: Product name:	**DPS osazený**			
Medical Technologies	Kreslil: Drown by: **BJ20/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP20/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD20/09/2001**	List: Sheet: **2** z of **5**	Číslo výkresu: Sheet number: **070-52shcpu109z1**	



Název výrobku: Product name:	**DPS osazený**			
BTL Medical Technologies	Kreslil: Drown by: **BJ20/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP20/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD20/09/2001**	List: Sheet: **3** z of **5**	Číslo výkresu: Sheet number:	**070-52shcpu109z1**



Název výrobku: / Product name:	**DPS osazený**			
Medical Technologies	Kreslil: / Drown by: **BJ20/09/2001**	Materiál: / Material:		
	Konstr.: / Designed by: **LP20/09/2001**	Povrch. úprava: / Surface finish:		Měřítko: / Scale:
	Schválil: / Approved by: **TD20/09/2001**	List: / Sheet: **4** z / of **5**	Číslo výkresu: / Sheet number: **070-52shcpu109z1**	



Název výrobku: Product name:	**DPS osazený**			
Medical Technologies	Kreslil: Drown by: **BJ20/09/2001**	Materiál: Material:		
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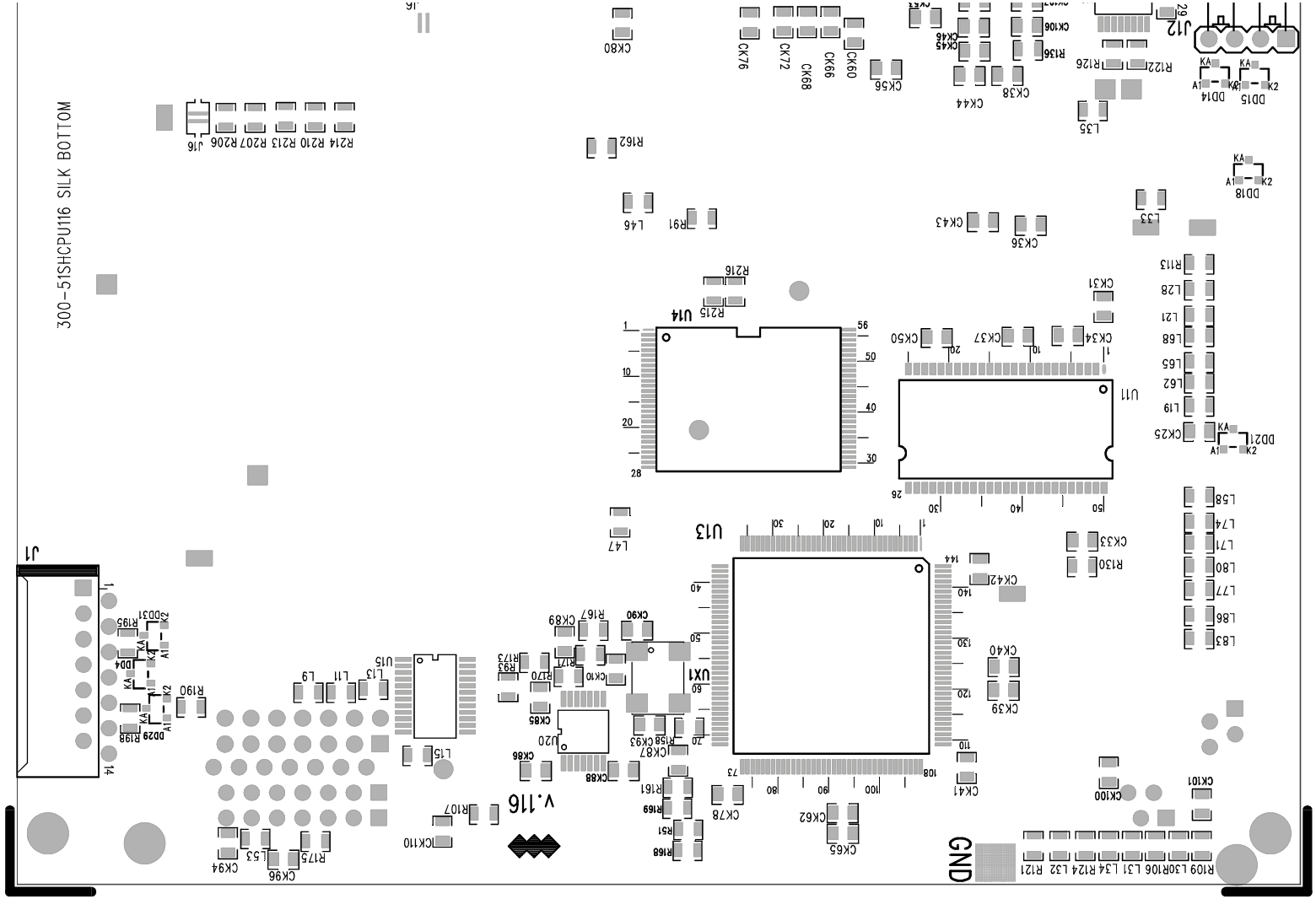
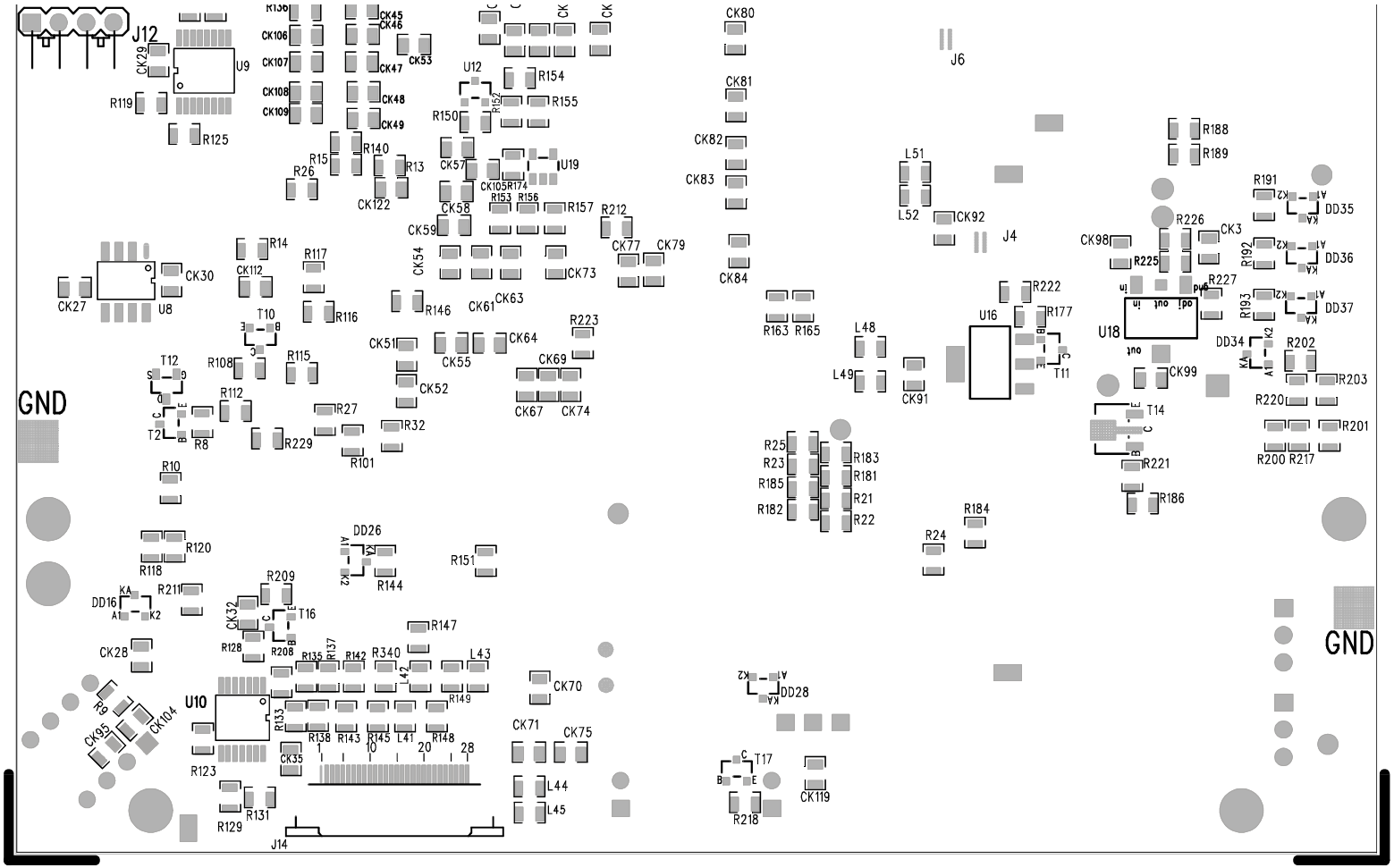
	Schválil: Approved by: **TD20/09/2001**	List: Sheet: **5** z of **5**	Číslo výkresu: Sheet number:	**070-52shcpu109z1**

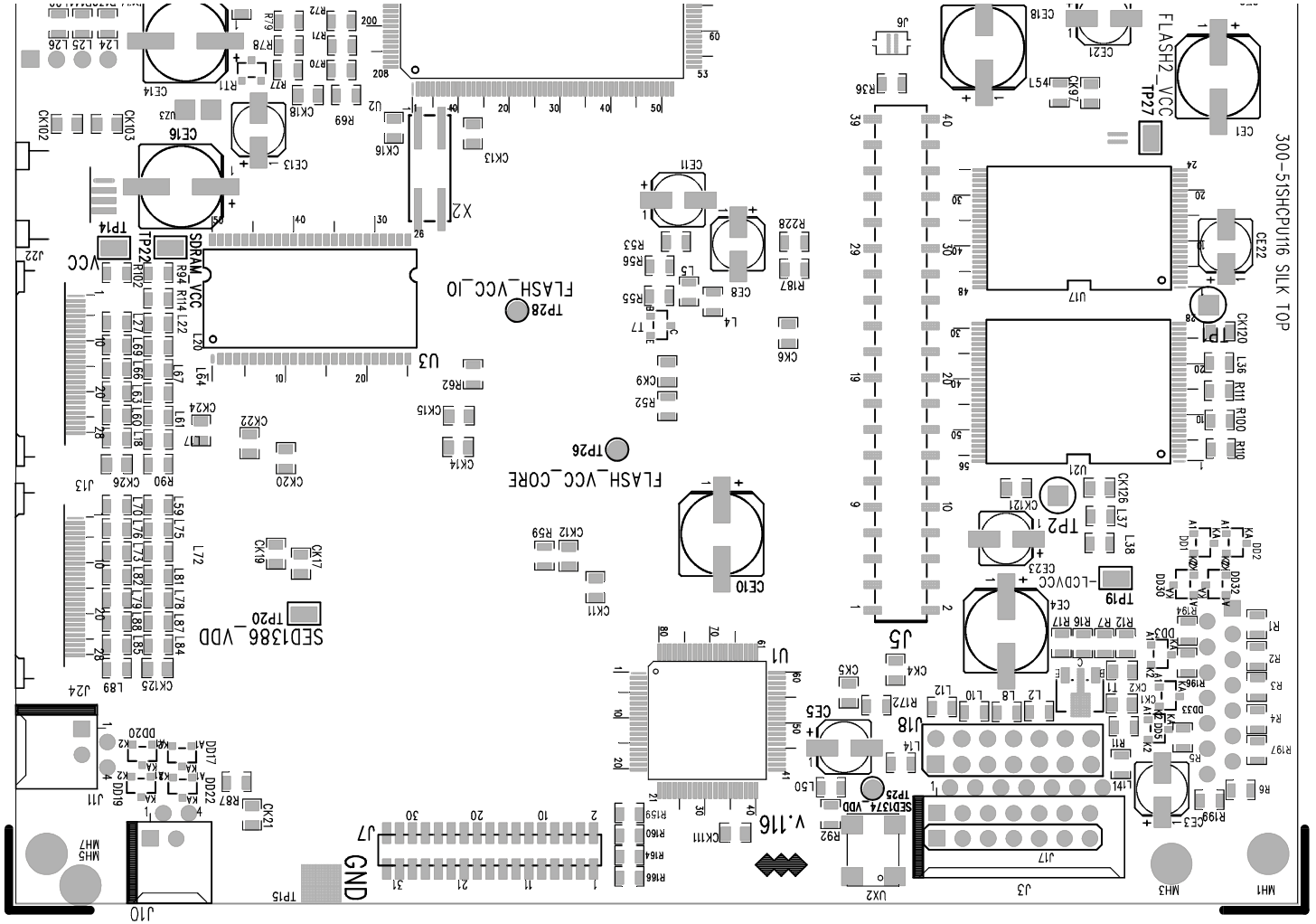


Název výrobku: / Product name:	**DPS - osazený**			
BTL Medical Technologies	Kreslil: / Drown by: **BJ16/08/2001**	Materiál: / Material:		
	Konstr.: / Designed by: **LP16/08/2001**	Povrch. úprava: / Surface finish:		Měřítko: / Scale:
	Schválil: / Approved by: **TD16/08/2001**	List: / Sheet: **2** z / of **5**	Číslo výkresu: / Sheet number: **300-52shcpu116**	

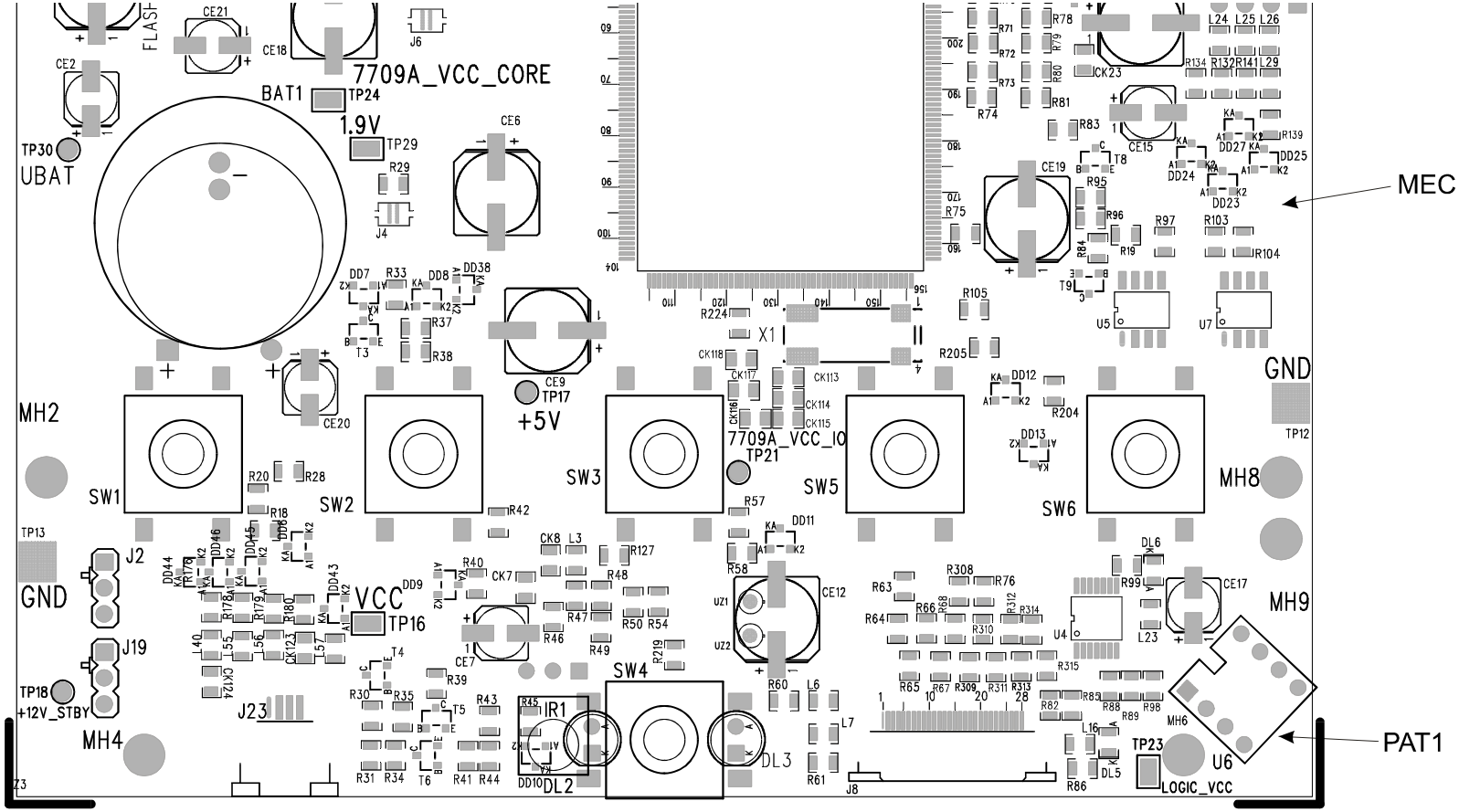


Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Púv. verze: Previous ver.:
V1	věcná změna	BJ26/10/2001	LP26/10/2001	TD26/10/2001	111
V2	věcná změna	BJ12/02/2002	LP12/02/2002	TD12/02/2002	112z1
V3	věcná změna	BJ08/10/2002	AM08/10/2002	TD08/10/2002	114

Název výrobku: Product name:	DPS - osazený			
Medical Technologies	Kreslil: Drown by: BJ16/08/2001	Materiál: Material:		
	Konstr.: Designed by: LP16/08/2001	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: TD16/08/2001	List: Sheet: 1 z of 5	Číslo výkresu: Sheet number:	300-52shcpu116

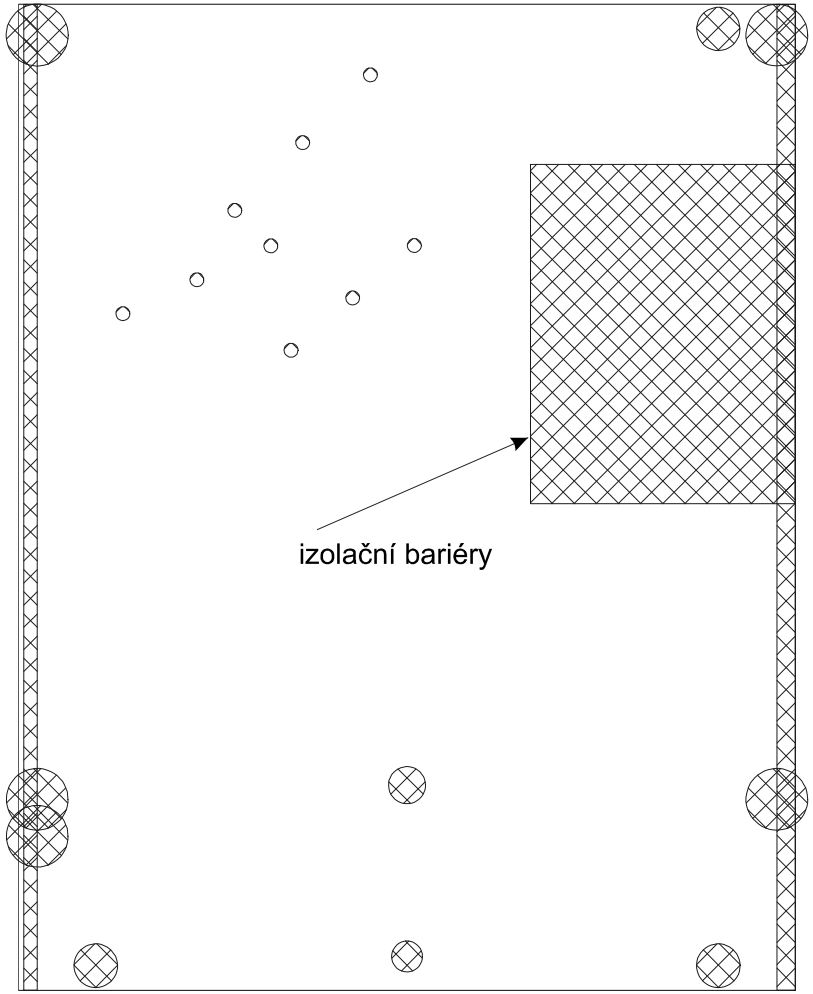


Název výrobku: Product name:	**DPS - osazený**			
BTL Medical Technologies	Kreslil: Drown by: **BJ16/08/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/08/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/08/2001**	List: Sheet: **4** z of **5**	Číslo výkresu: Sheet number:	**300-52shcpu116**



Název výrobku: Product name:	**DPS - osazený**			
Medical Technologies	Kreslil: Drown by: **BJ16/08/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/08/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/08/2001**	List: **3** z of **5**	Číslo výkresu: Sheet number: **300-52shcpu116**	

BOTTOM



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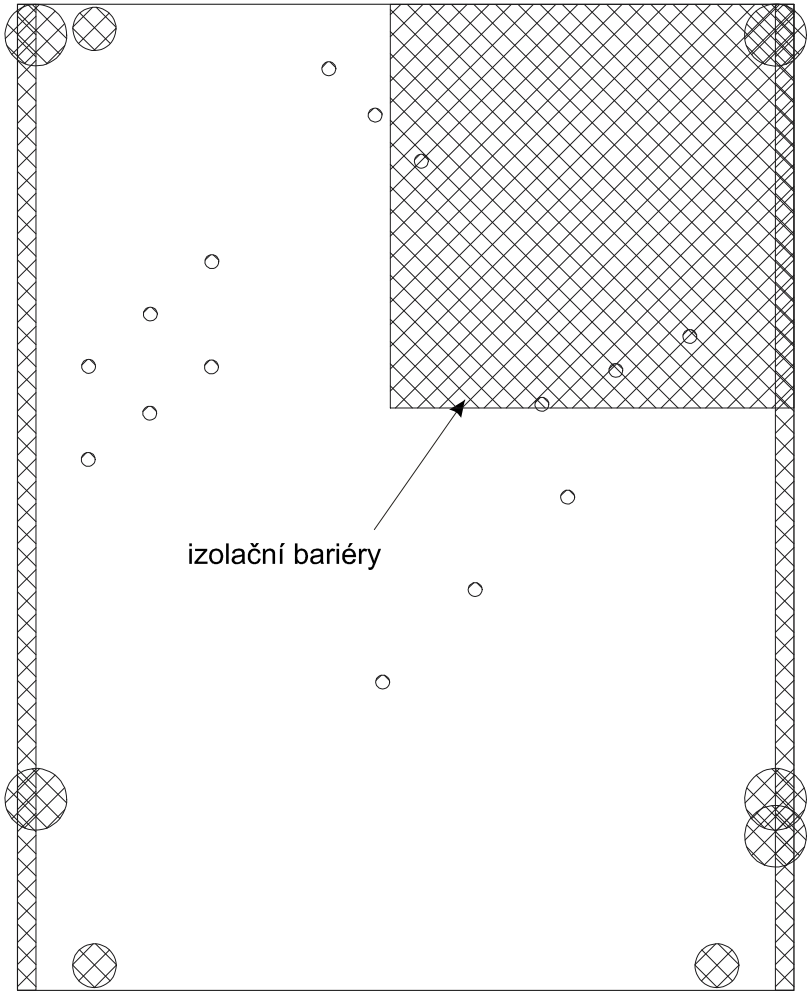
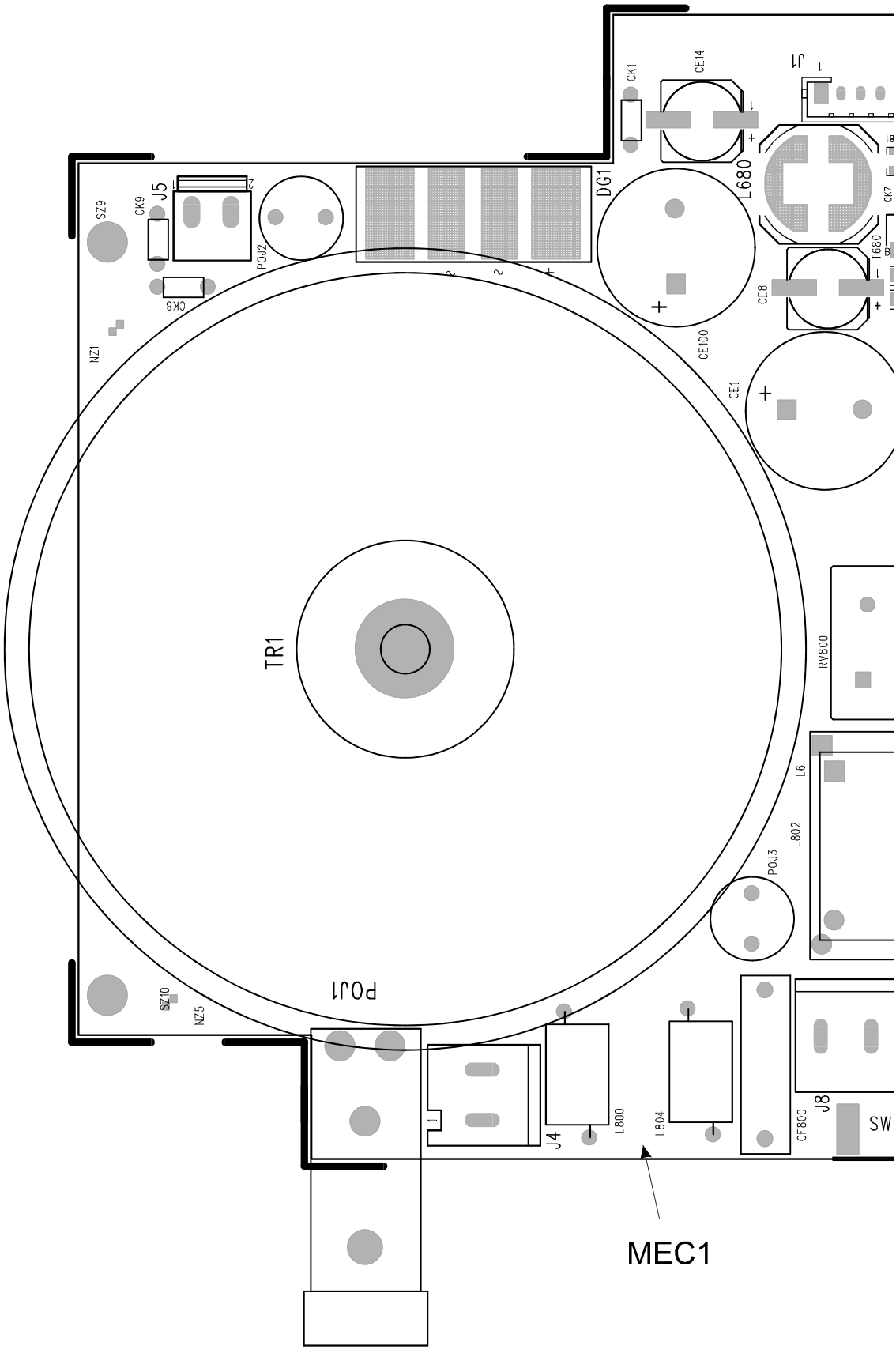
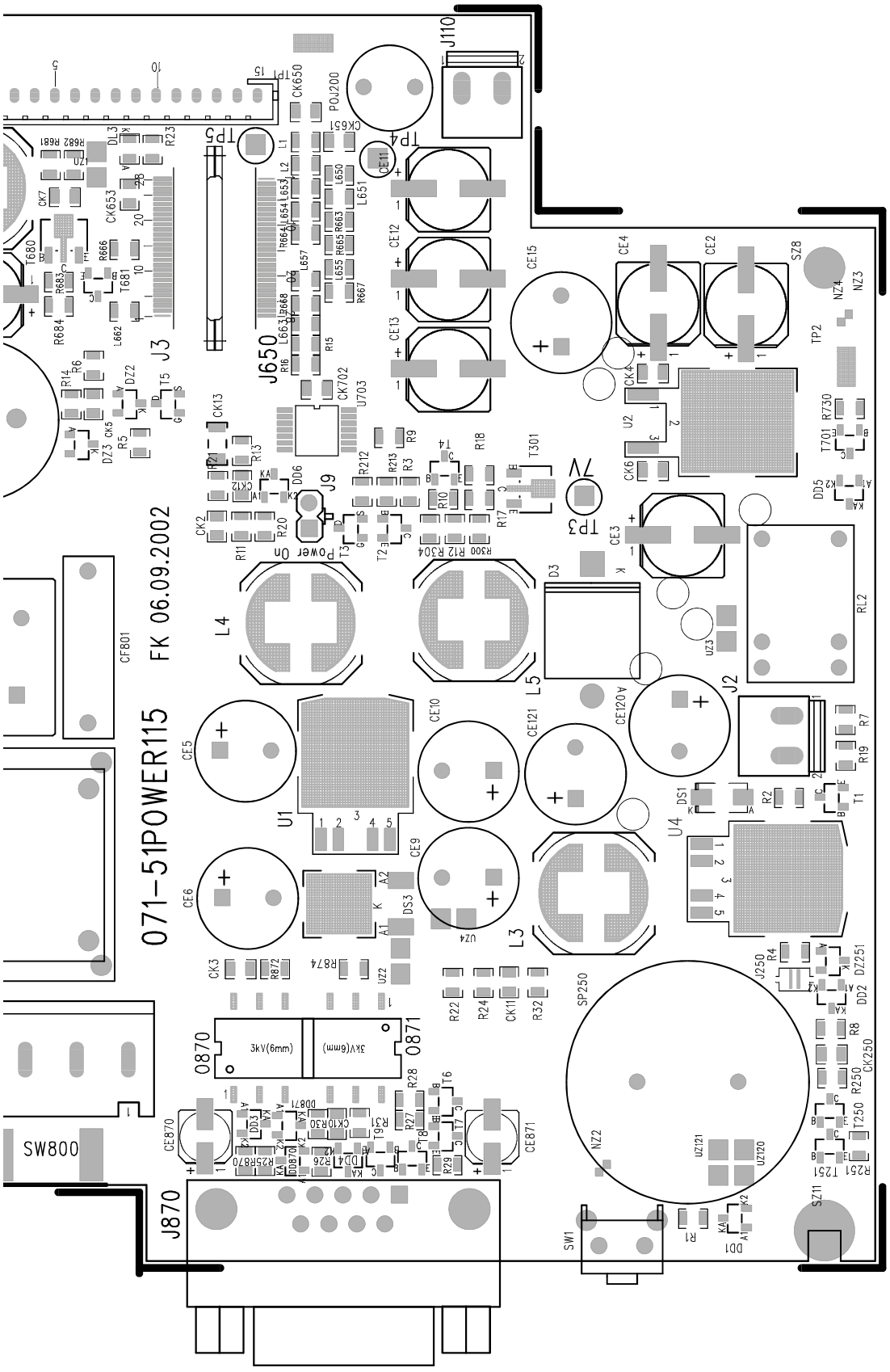


Název výrobku: Product name:	**DPS - osazený**			
Medical Technologies	Kreslil: Drown by: **BJ16/08/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/08/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/08/2001**	List: Sheet: **5** z of **5**	Číslo výkresu: Sheet number: **300-52shcpu116**	

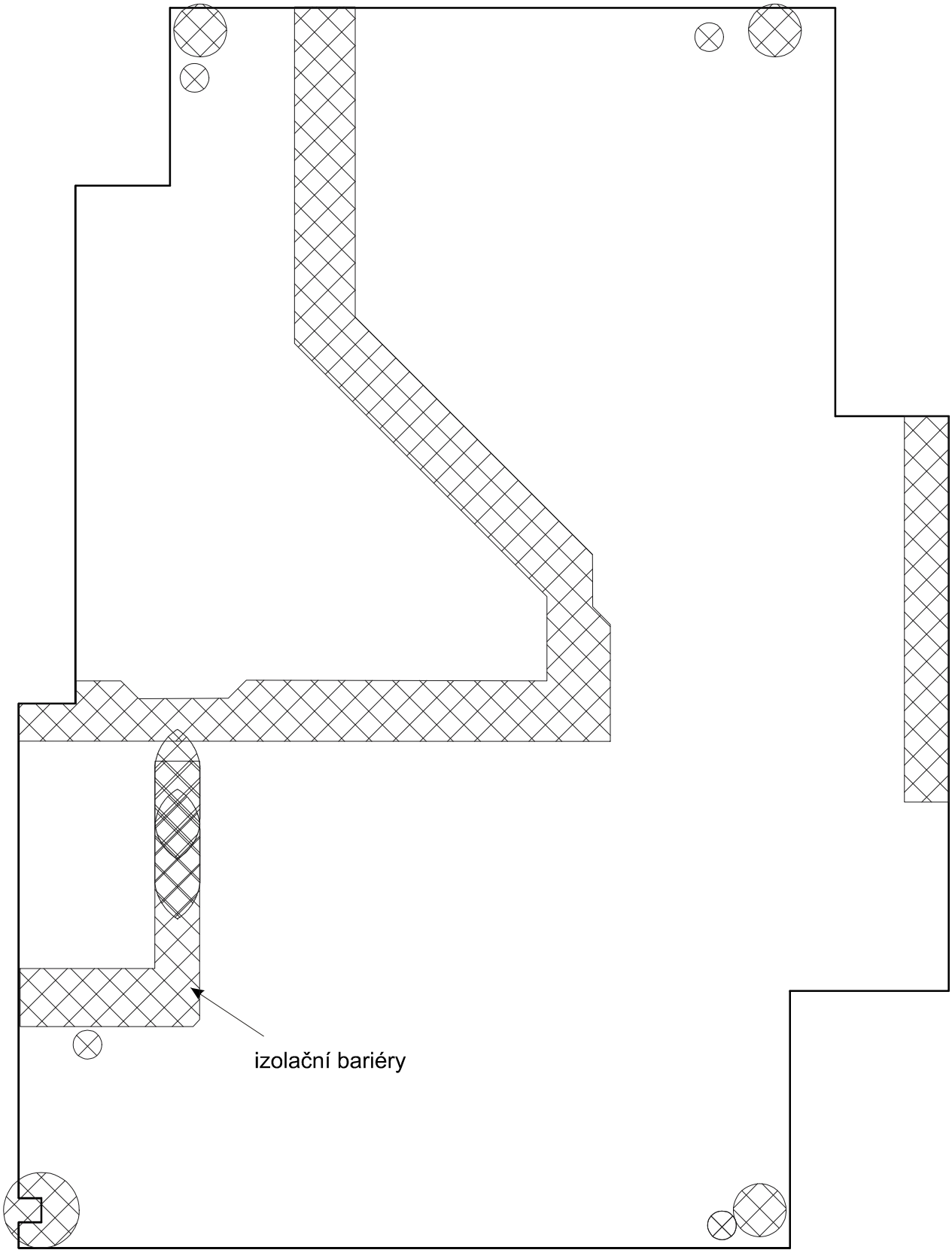


Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:
V1	**věcná změna**	BJ24/06/2002	AM24/06/2002	TD24/06/2002	108z2
V2	**věcná změna**	BJ17/10/2002	AM17/10/2002	TD17/10/2002	113

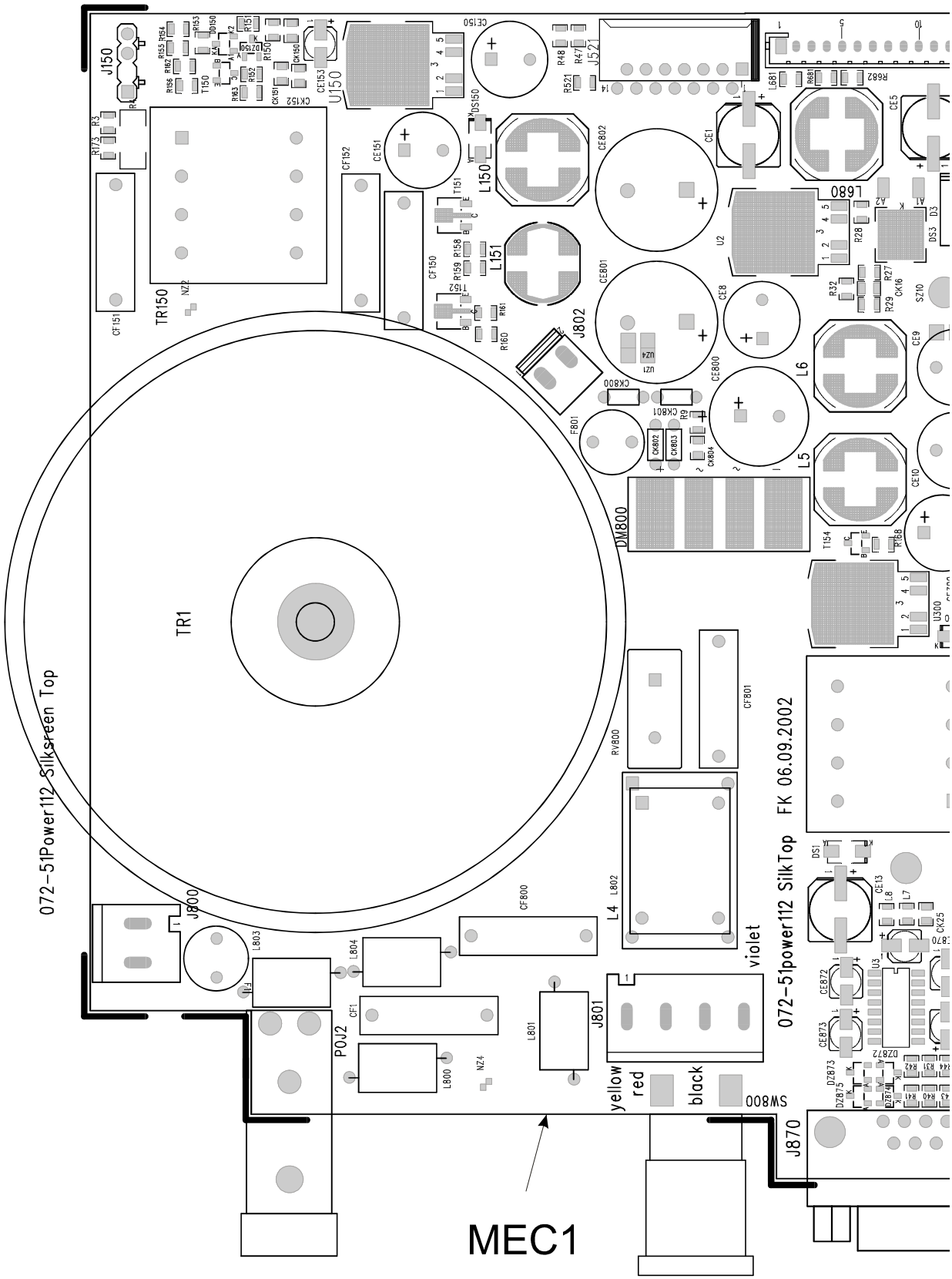
Název výrobku: Product name:	**DPS osazený**			
Medical Technologies	Kreslil: Drown by: **BJ26/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP26/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD26/09/2001**	List: **1** z **3** Sheet:	Číslo výkresu: Sheet number: **071-52power115**	



Název výrobku: Product name:	**DPS osazený**			
Medical Technologies	Kreslil: Drown by: **BJ26/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP26/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD26/09/2001**	List: Sheet: **2** z of **3**	Číslo výkresu: Sheet number:	**071-52power115**

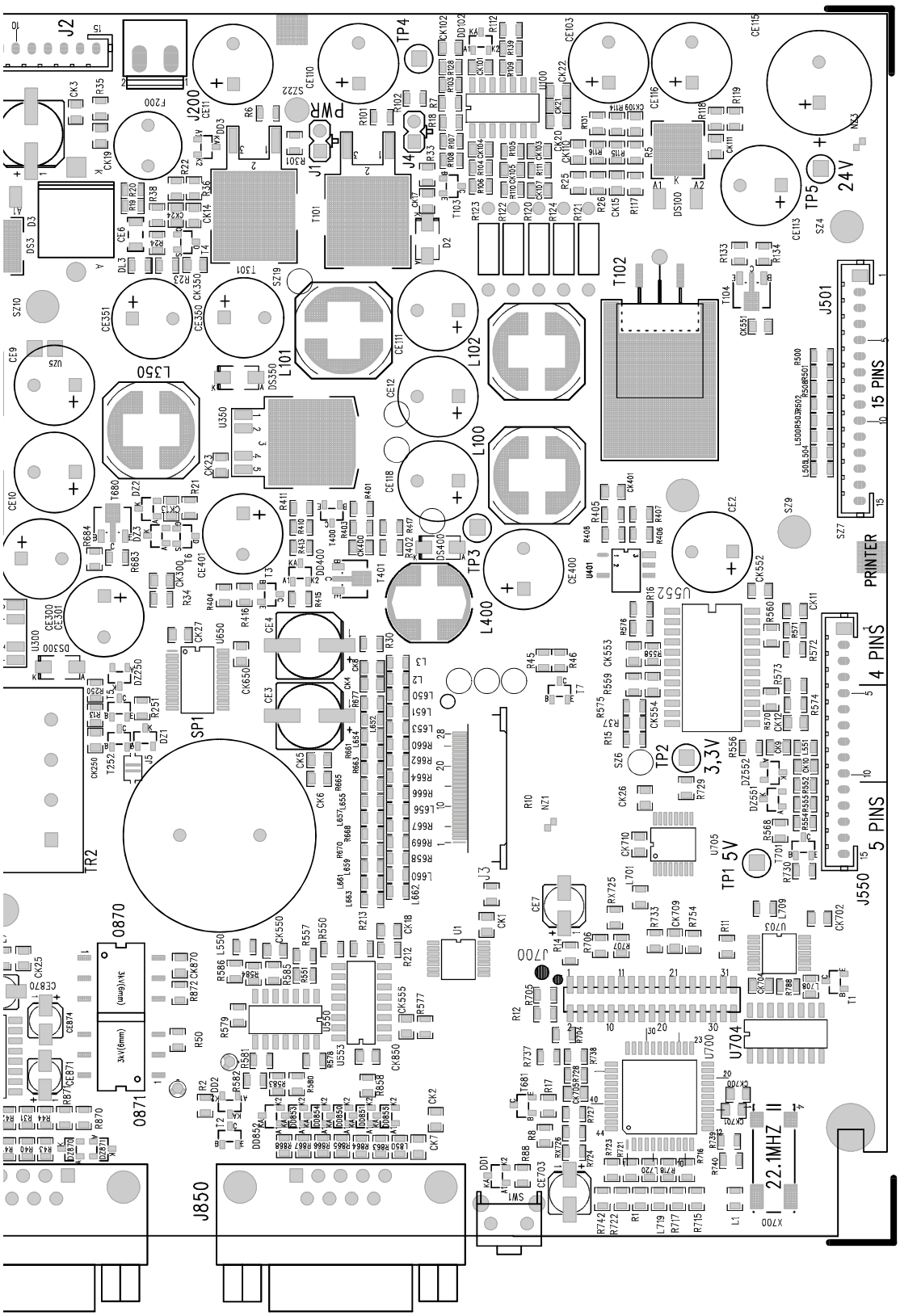


Název výrobku: Product name:	**DPS osazený**			
BTL Medical Technologies	Kreslil: Drown by: **BJ26/09/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP26/09/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD26/09/2001**	List: Sheet: **3** z of **3**	Číslo výkresu: Sheet number:	**071-52power115**

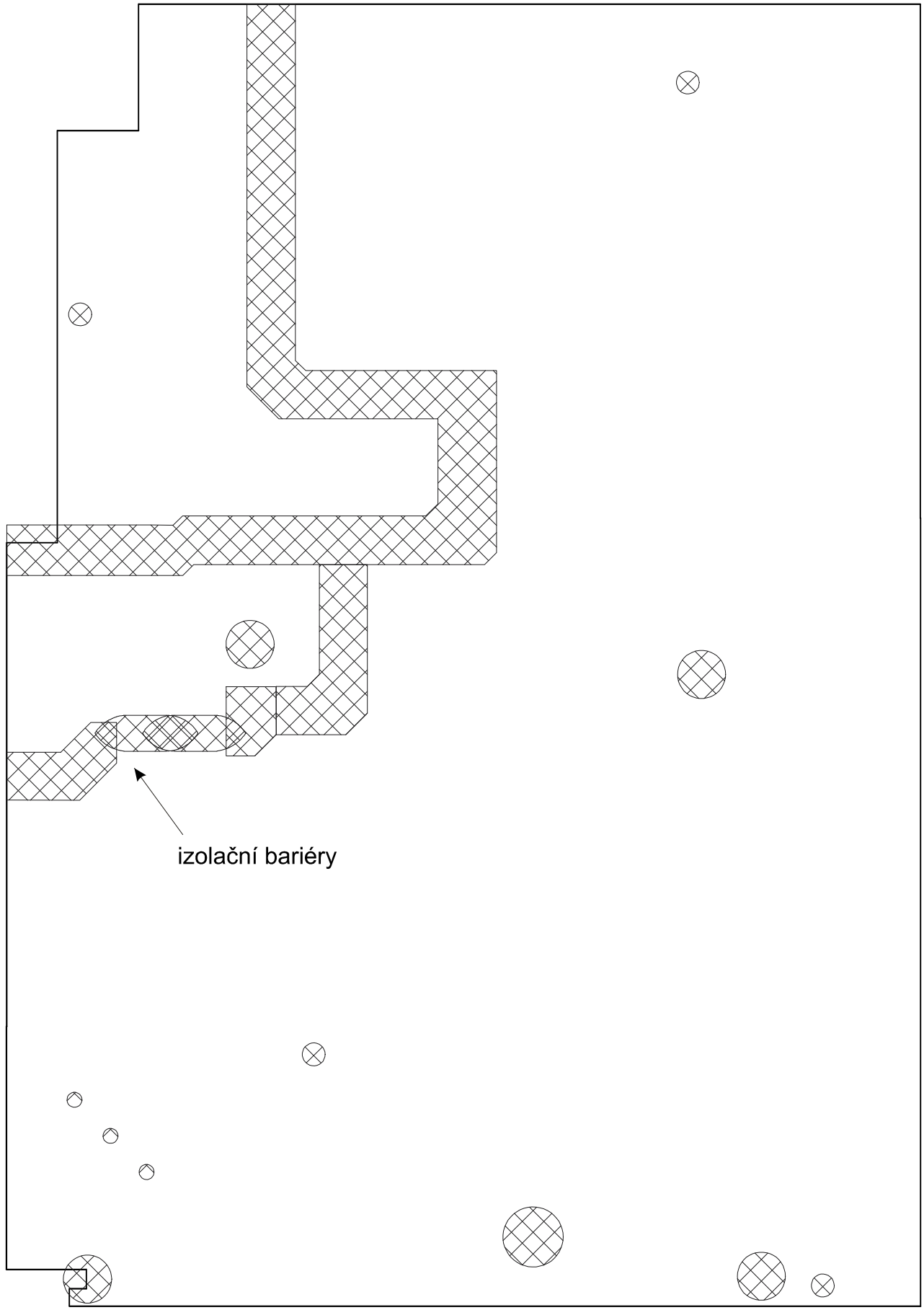


Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:
V1	věcná změna	BJ08/11/2001	LP08/11/2001	TD08/11/2001	107z4
V2	věcná změna	BJ17/10/2002	AM17/10/2002	TD17/10/2002	110

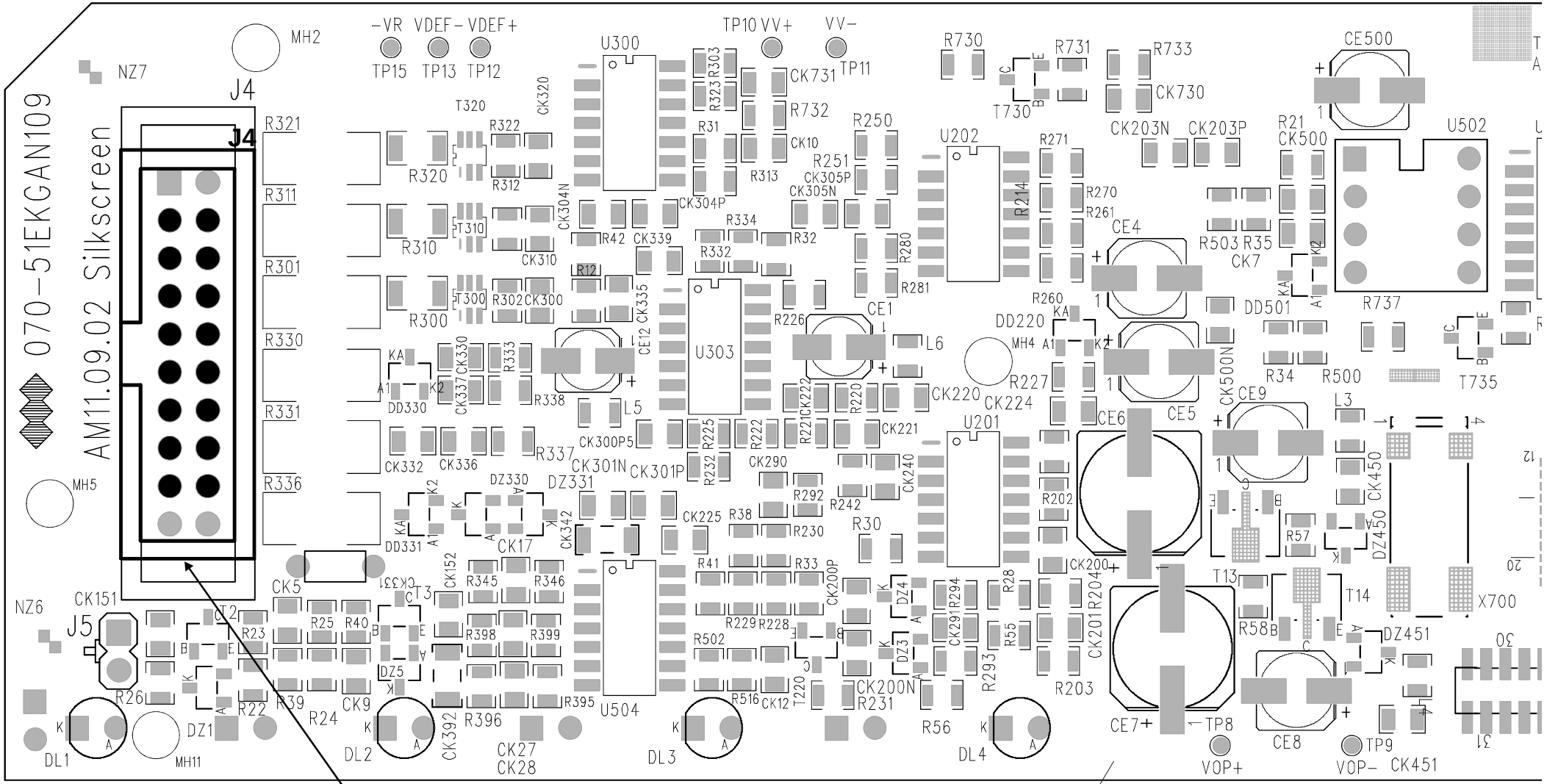
Název výrobku: Product name:	**osazený DPS**			
Medical Technologies	Kreslil: Drown by: **BJ22/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP22/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD22/10/2001**	List: **1** z of **3**	Číslo výkresu: Sheet number: **072-52power112**	



Název výrobku: Product name:	**osazený DPS**			
BTL Medical Technologies	Kreslil: Drown by: **BJ22/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP22/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD22/10/2001**	List: Sheet: **2** z of **3**	Číslo výkresu: Sheet number: **072-52power112**	

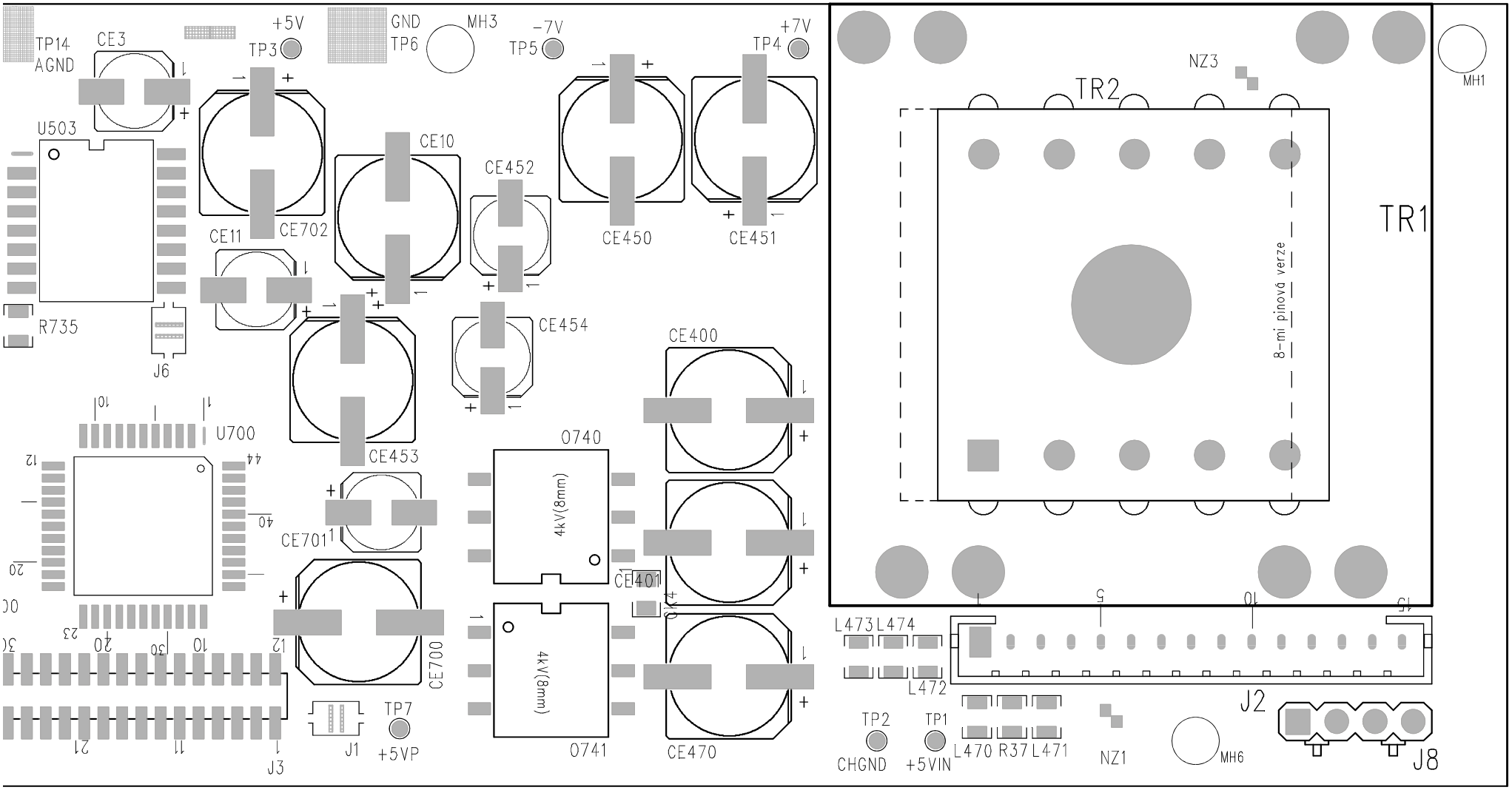


Název výrobku: Product name: **osazený DPS**				
Medical Technologies	Kreslil: Drown by: **BJ22/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP22/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD22/10/2001**	List: Sheet: **3** z of **3**	Číslo výkresu: Sheet number: **072-52power112**	

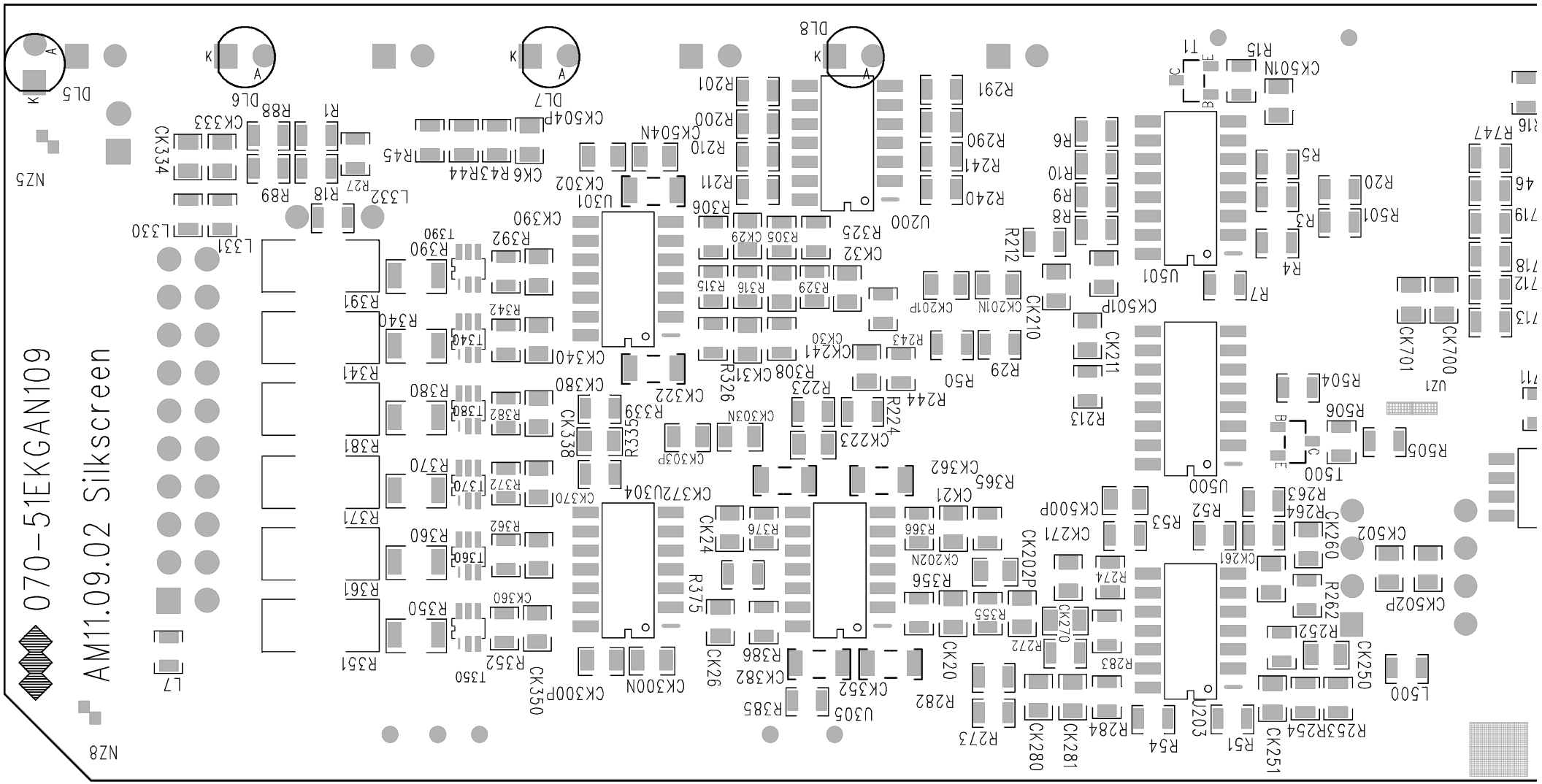


Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:
V1	**věcná změna**	**BJ22/04/2002**	**LP22/04/2002**	**TD22/04/2002**	**105z1**
V2	**věcná změna**	**BJ04/10/2002**	**AM04/10/2002**	**TD04/10/2002**	**108**

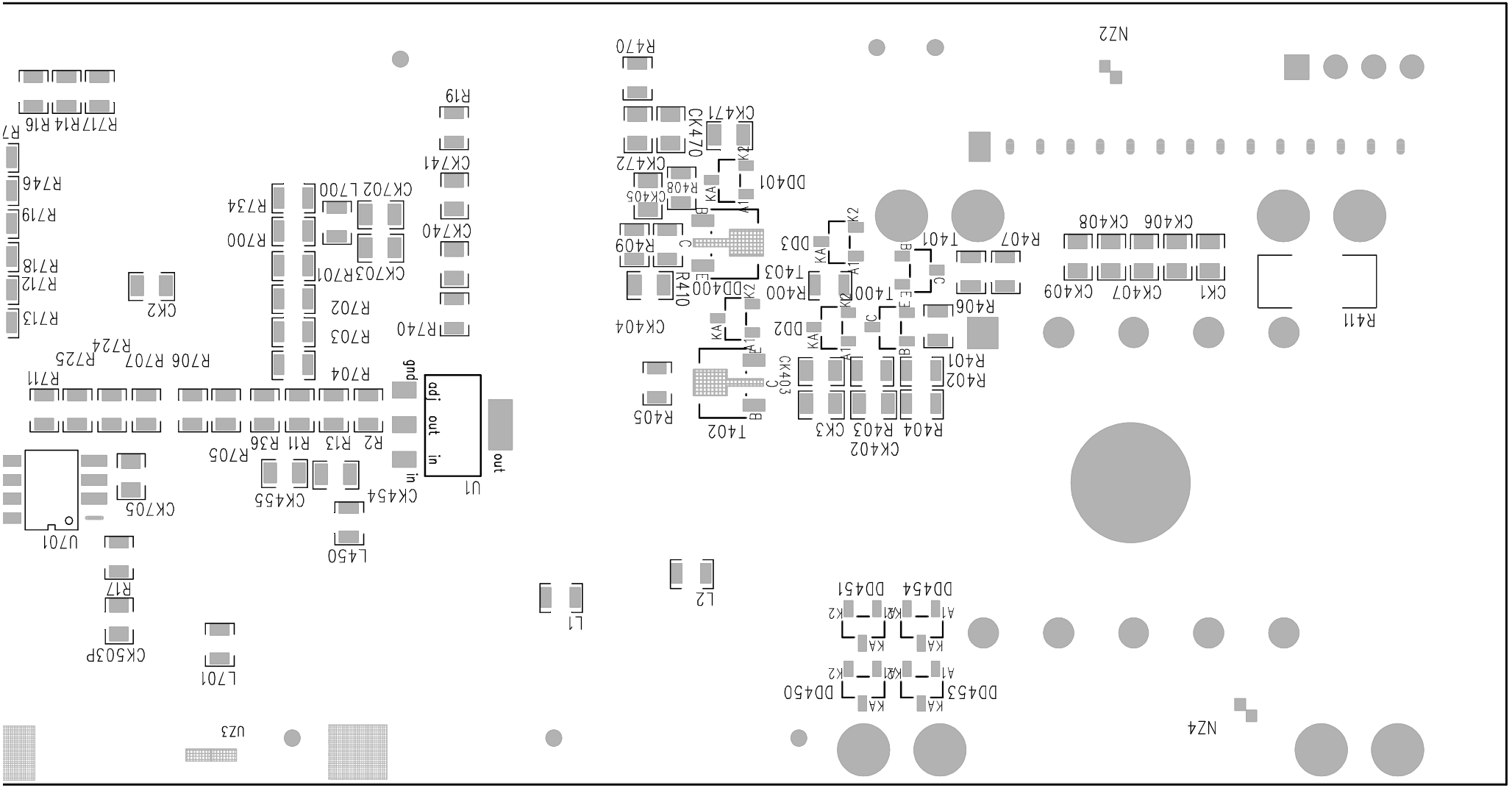
Název výrobku: Product name: **osazený DPS**				
Medical Technologies	Kreslil: Drown by: **BJ16/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/10/2001**	List: Sheet: **1** z of **5**	Číslo výkresu: Sheet number: **070-52ekgan109**	



Název výrobku: Product name:	**osazený DPS**			
Medical Technologies	Kreslil: Drown by: **BJ16/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/10/2001**	List: **2** z of **5**	Číslo výkresu: Sheet number: **070-52ekgan109**	



Název výrobku: Product name: **osazený DPS**				
Medical Technologies	Kreslil: Drown by: **BJ16/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/10/2001**	List: Sheet: **3** z of **5**	Číslo výkresu: Sheet number: **070-52ekgan109**	



Název výrobku: Product name:	**osazený DPS**			
Medical Technologies	Kreslil: Drown by: **BJ16/10/2001**	Materiál: Material:		
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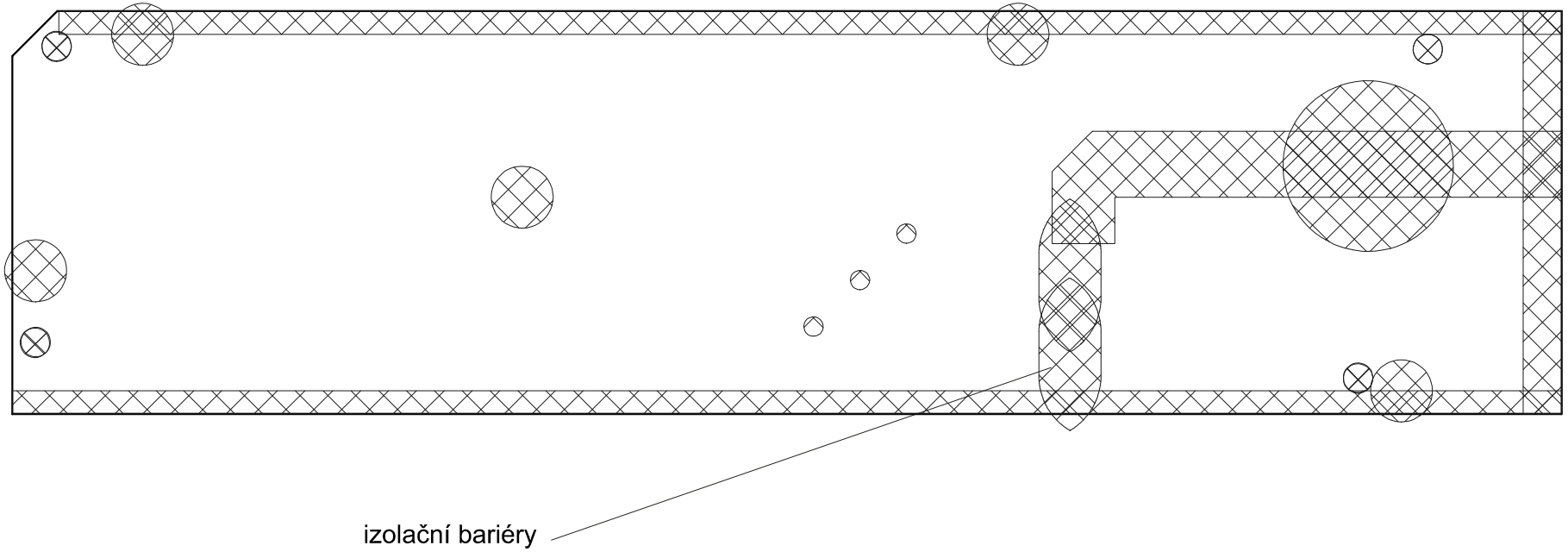
	Schválil: Approved by: **TD16/10/2001**	List: **4** z of **5**	Číslo výkresu: Sheet number: **070-52ekgan109**	

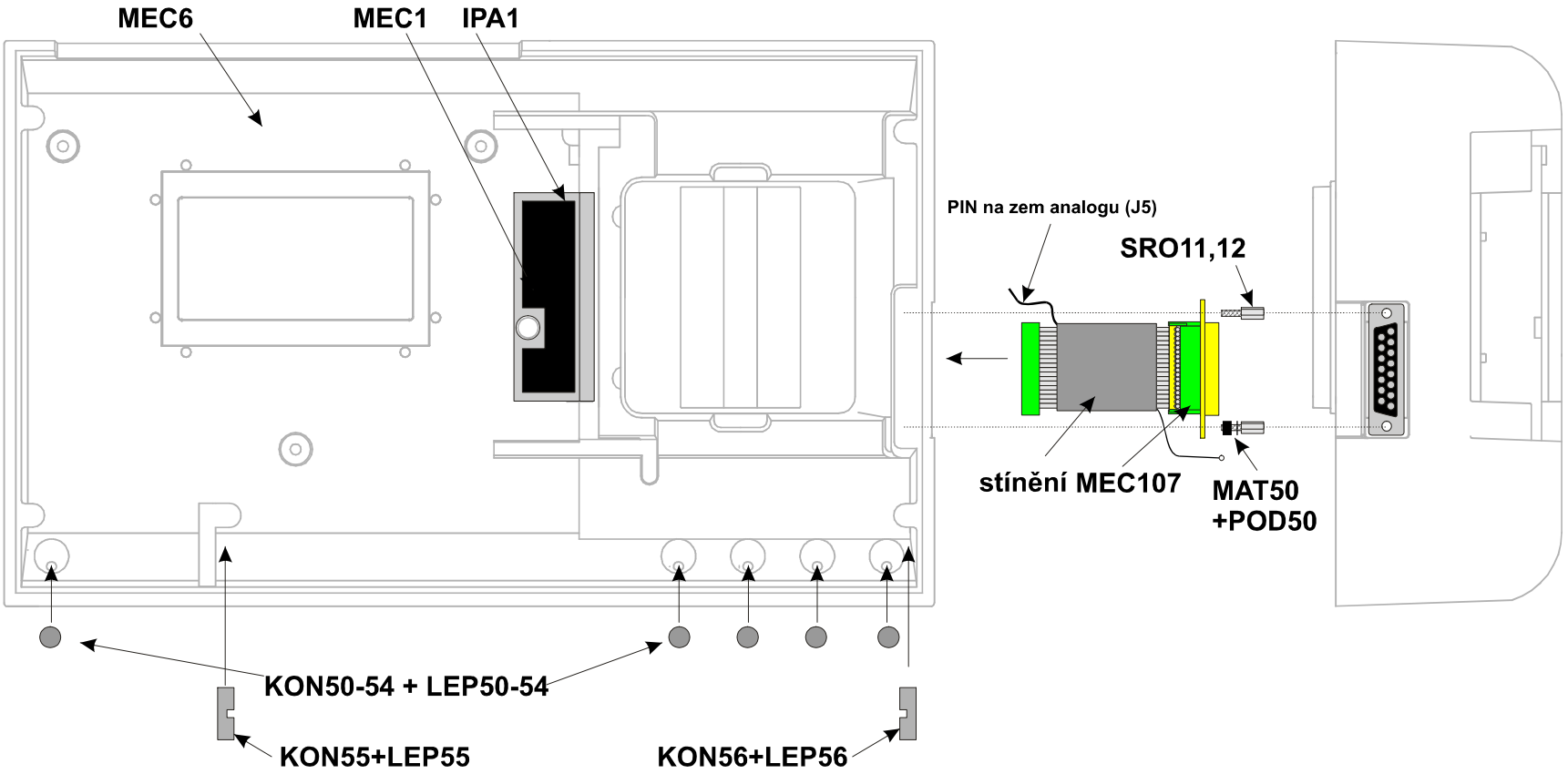


Název výrobku: Product name: **osazený DPS**				
BTL Medical Technologies	Kreslil: Drown by: **BJ16/10/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP16/10/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD16/10/2001**	List: Sheet: **5** z of **5**	Číslo výkresu: Sheet number: **070-52ekgan109**	

Medical Technologies

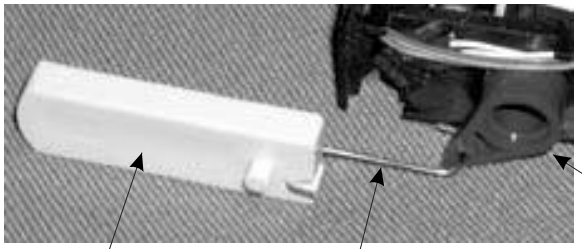
BTL-08 Series ECG

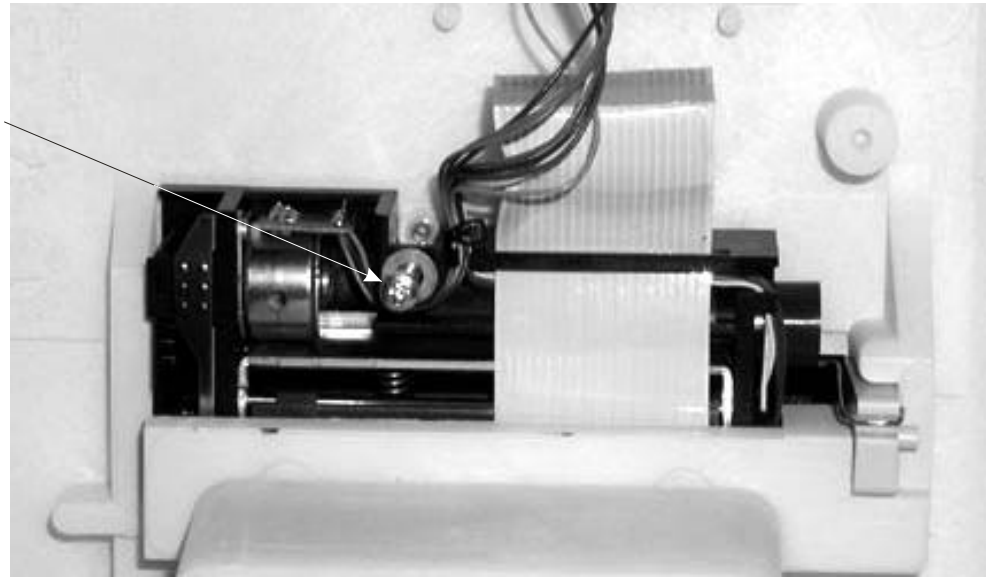
Assembly Drawing

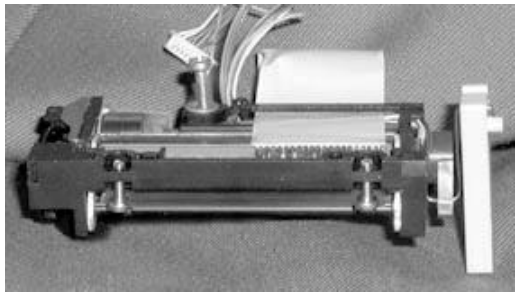


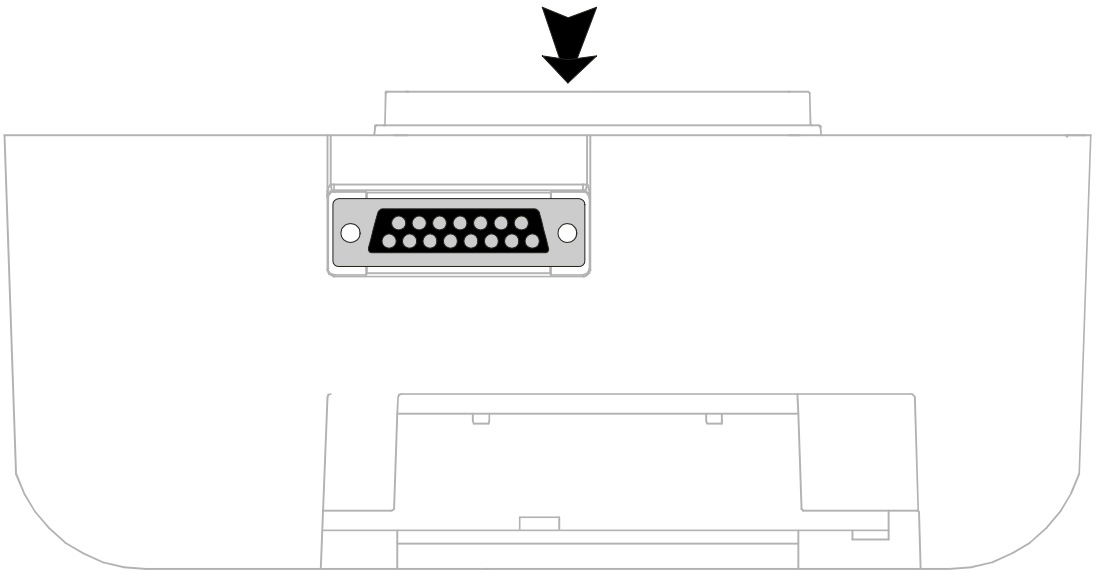
Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:
V1	věcná změna	BJ26/09/2002	AM26/09/2002	TD26/09/2002	100z4

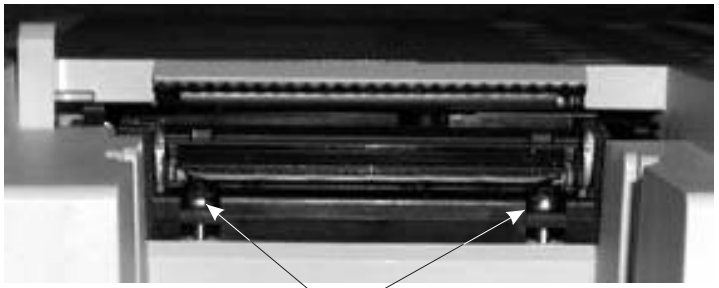
Název výrobku: Product name:	Montáž přístroje			
Medical Technologies	Kreslil: Drown by: BJ13/11/2001	Materiál: Material:		
	Konstr.: Designed by: LP13/11/2001	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: TD13/11/2001	List: 1 z Sheet: 1 of 8	Číslo výkresu: Sheet number: 071-pri110	











Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
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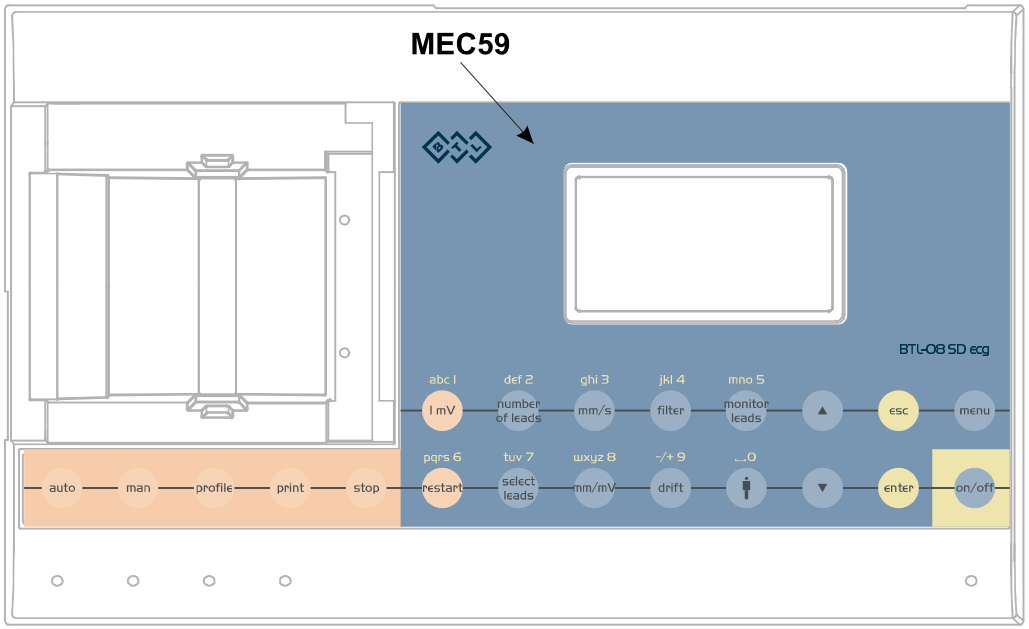

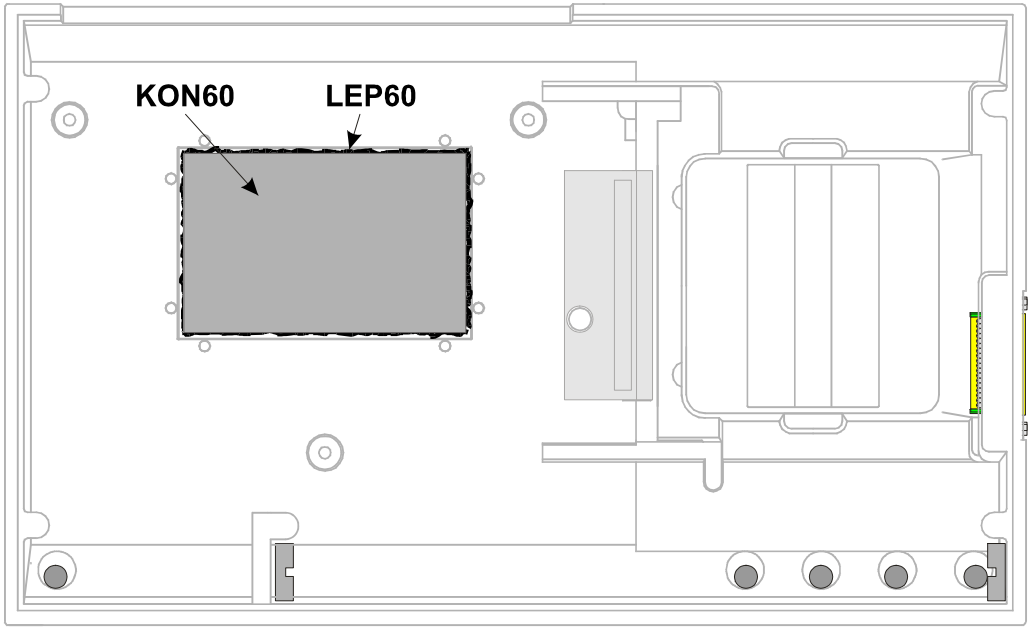

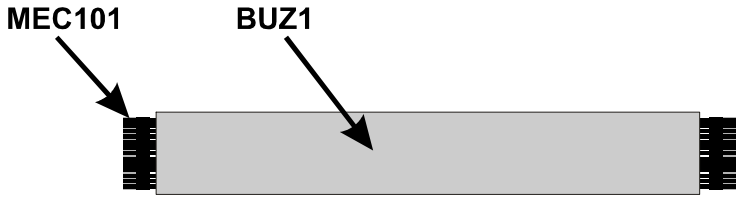

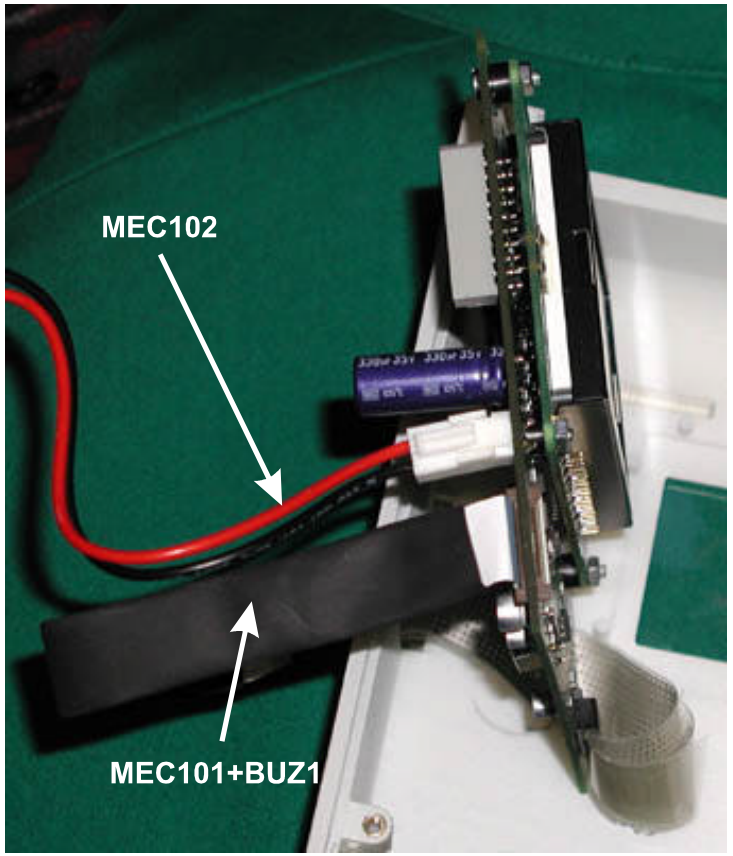

Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
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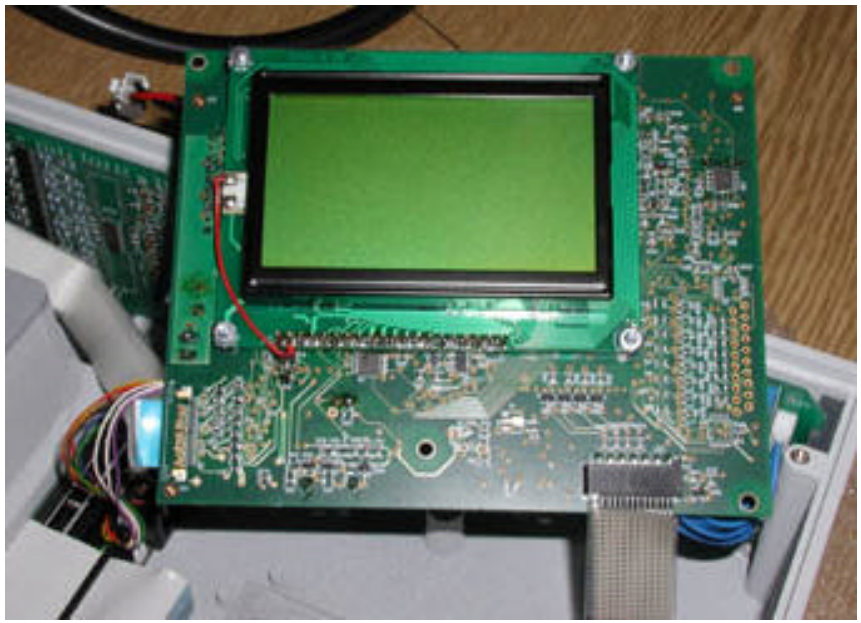
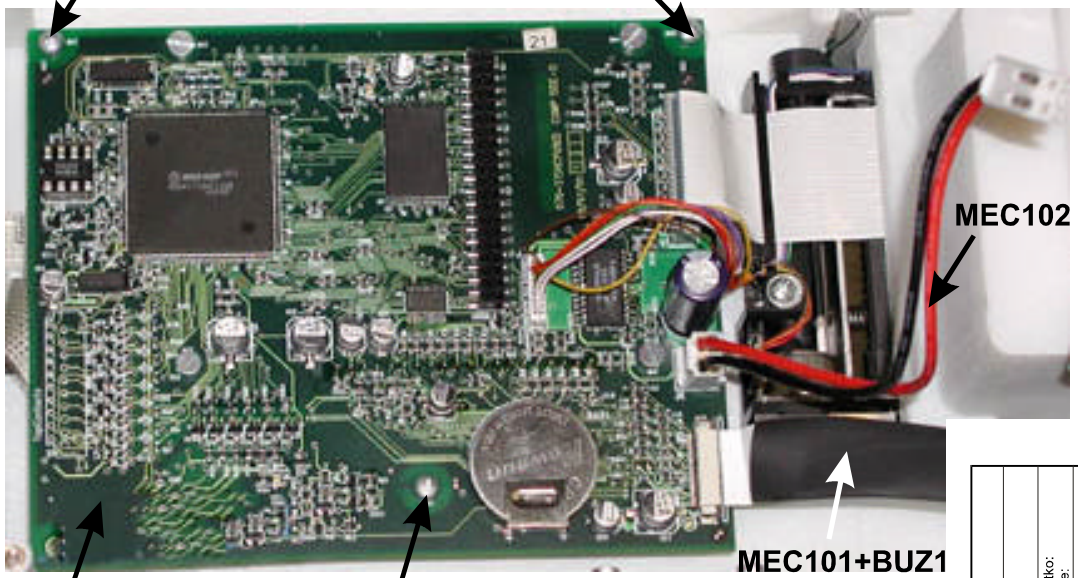
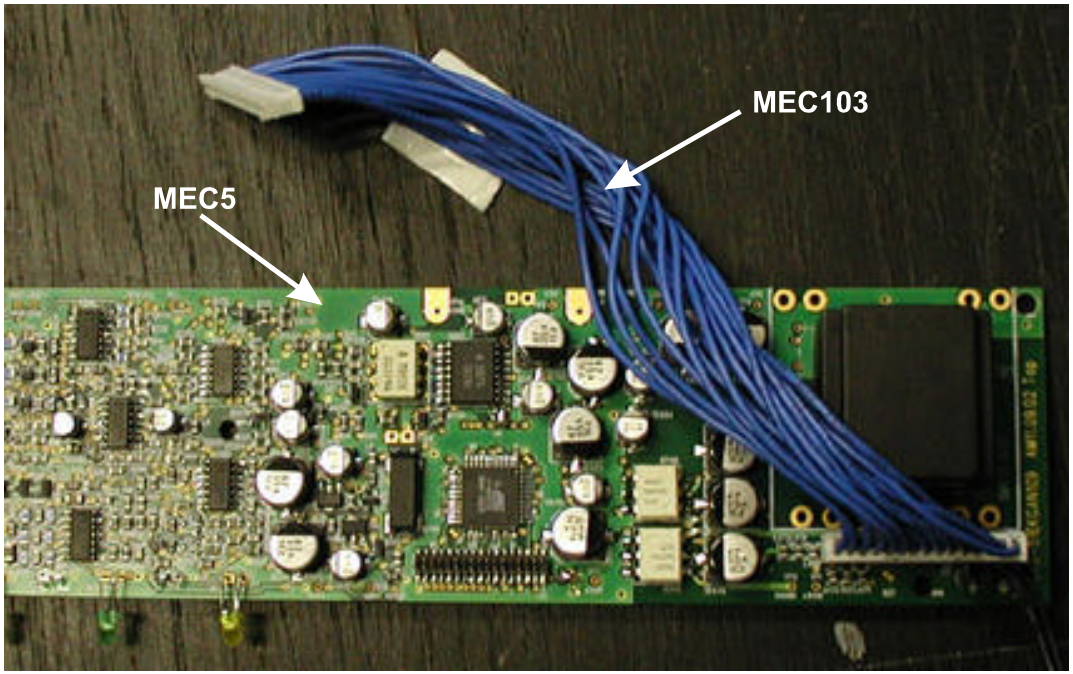
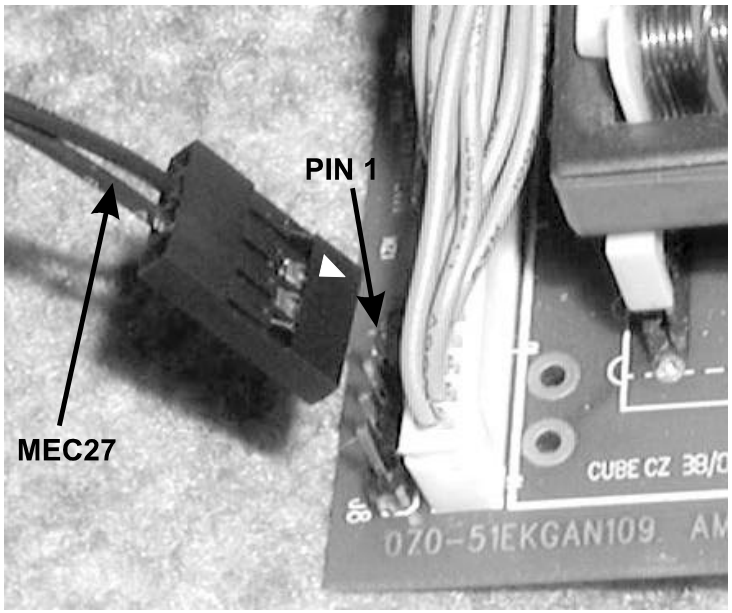
CPU



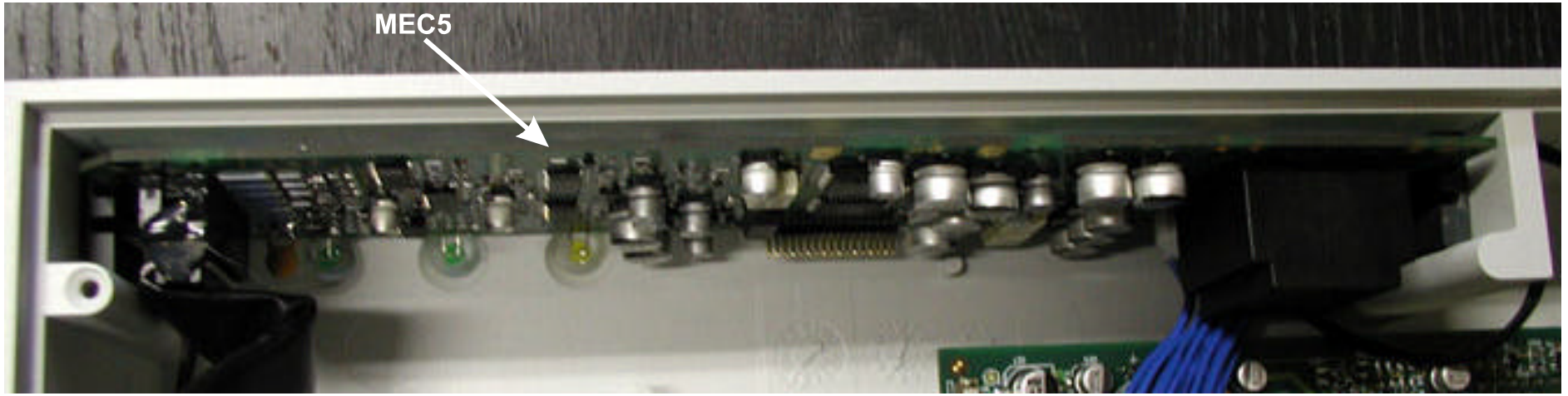


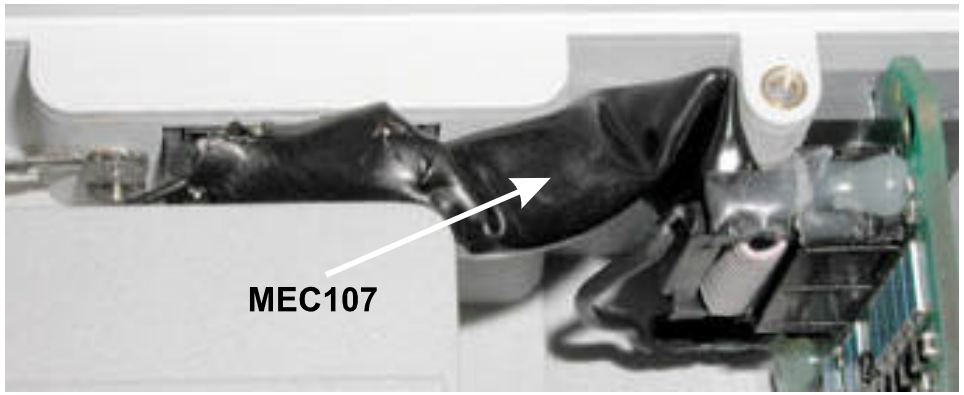
EKG ANALOG

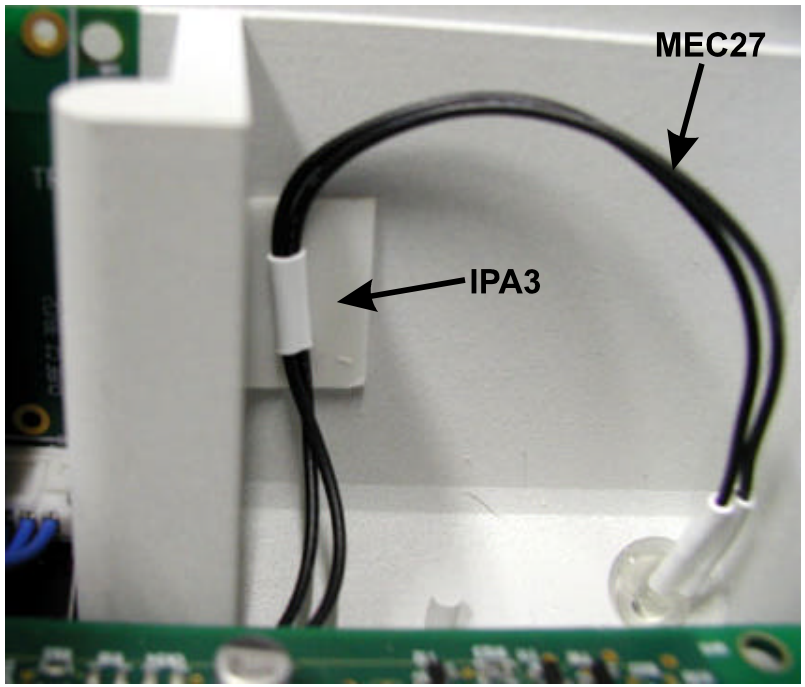




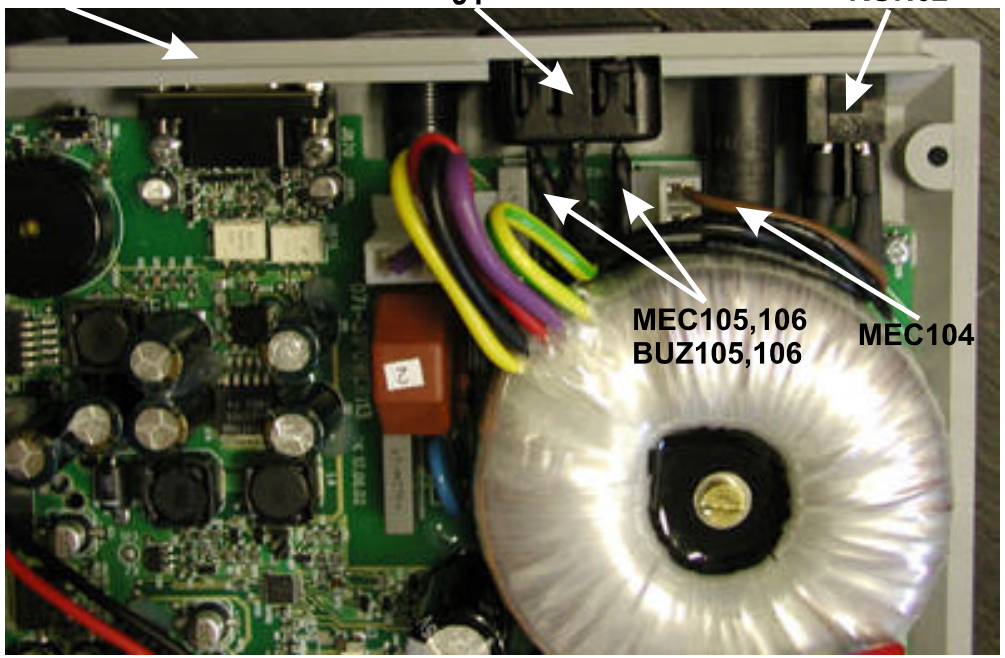
Název výrobku: Product name:	Montáž přístroje				
Medical Technologies	Kreslil: Drown by: BJ13/11/2001	Materiál: Material:		Měřítko: Scale:	
	Konstr.: Designed by: LP13/11/2001	Povrch. úprava: Surface finish:			
	Schválil: Approved by: TD13/11/2001	List: Sheet: 4 z of 8	Číslo výkresu: Sheet number: 071-pri110		

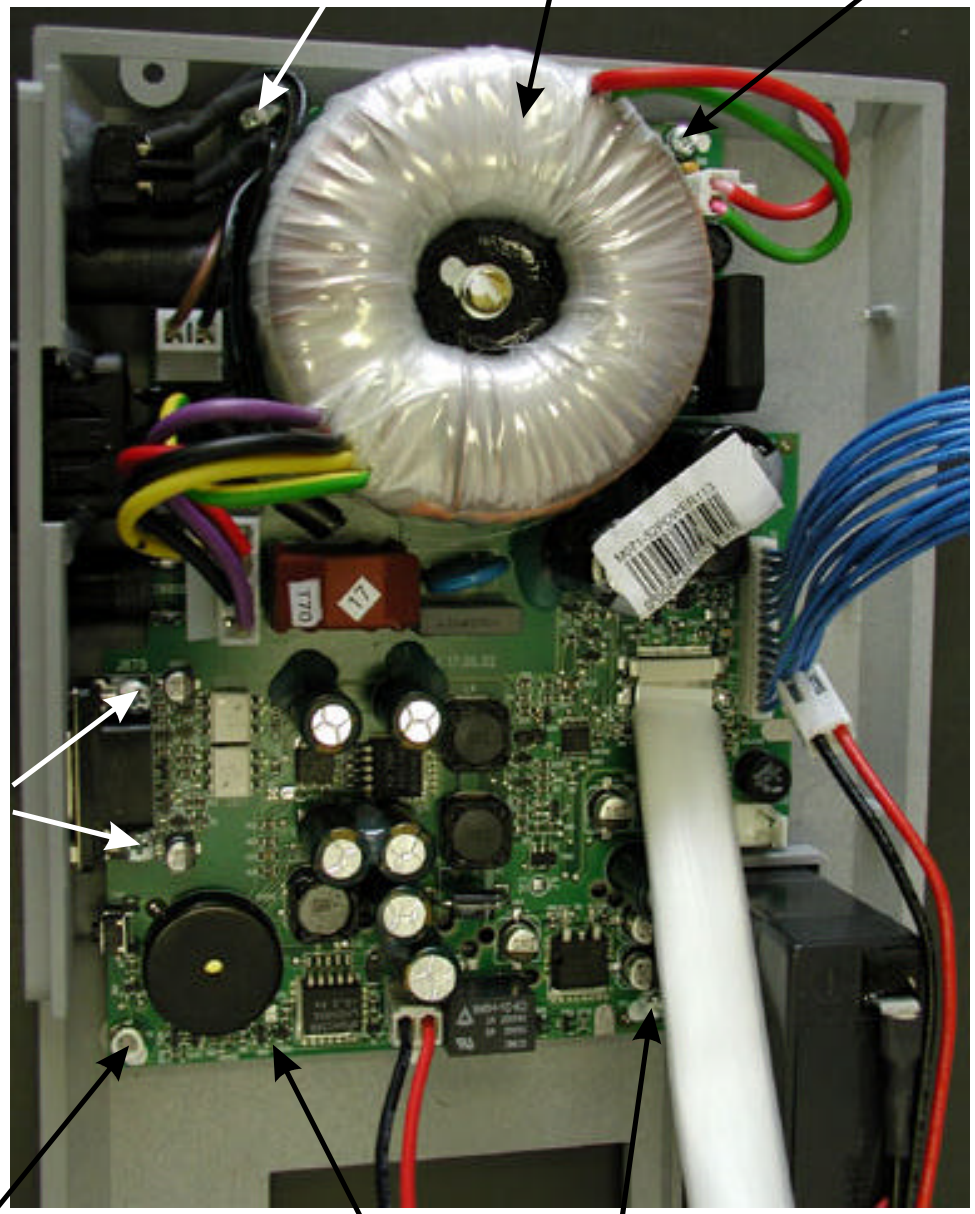




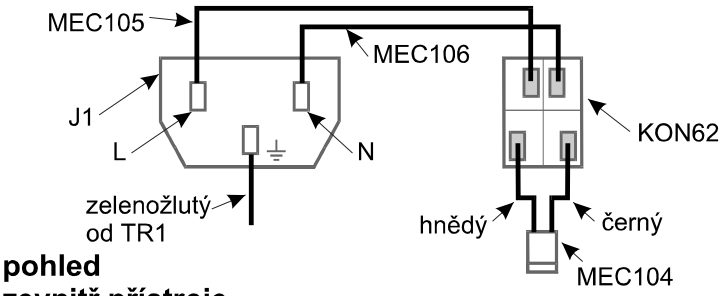


Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD13/11/2001**	List: Sheet: **5** z of **8**	Číslo výkresu: Sheet number: **071-pri110**	





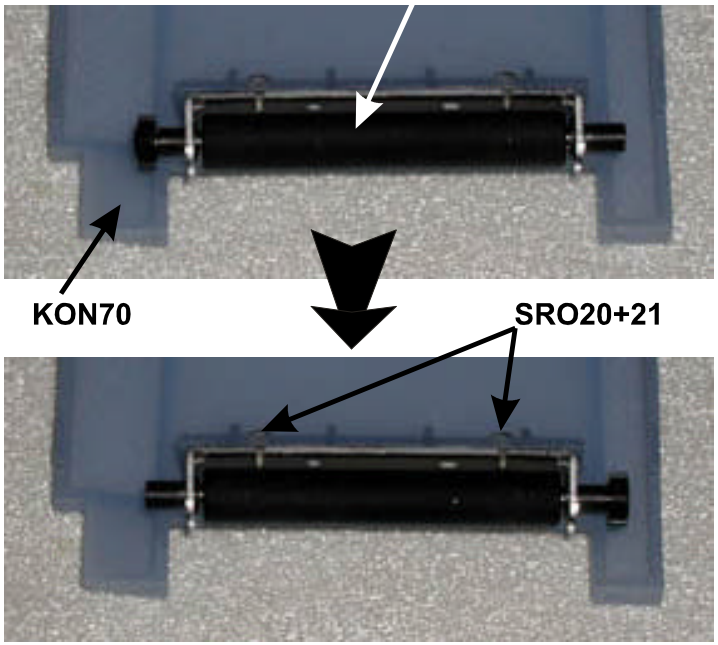
Schématické propojení J1 a KON62 - NUTNO DODRŽET

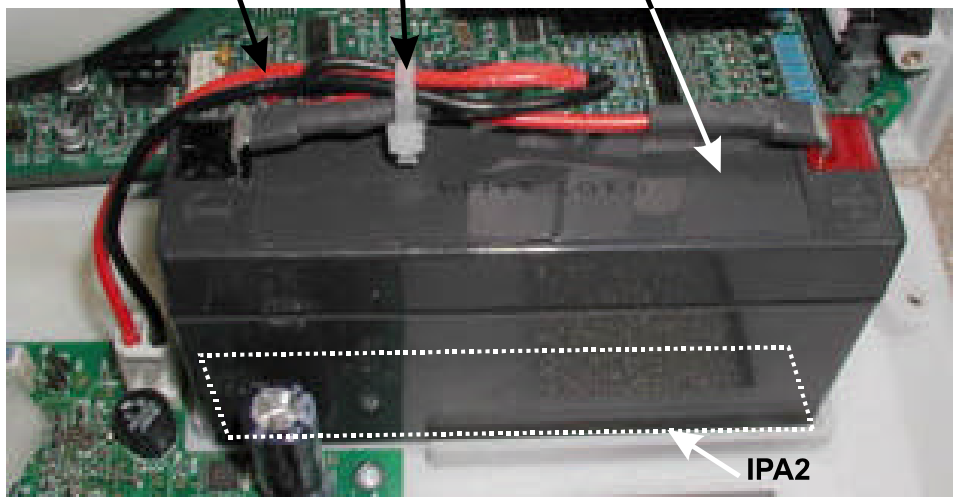


pohled zevnitř přístroje

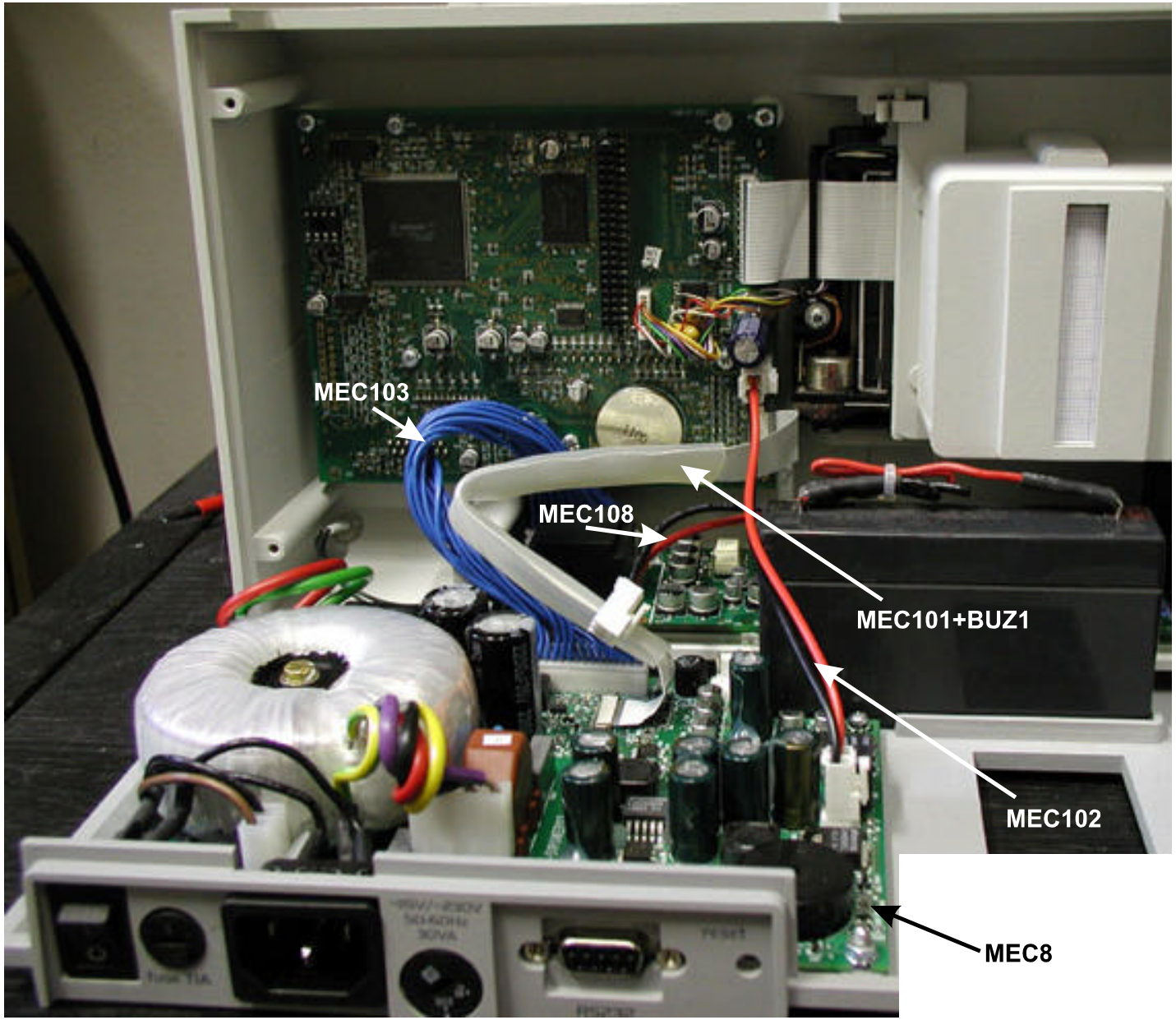
Název výrobku: / Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: / Drown by: **BJ13/11/2001**	Materiál: / Material:		
	Konstr.: / Designed by: **LP13/11/2001**	Povrch. úprava: / Surface finish:	Měřítko: / Scale:	
	Schválil: / Approved by: **TD13/11/2001**	List: / Sheet: **6** z / of **8**	Číslo výkresu: / Sheet number: **071-pri110**	

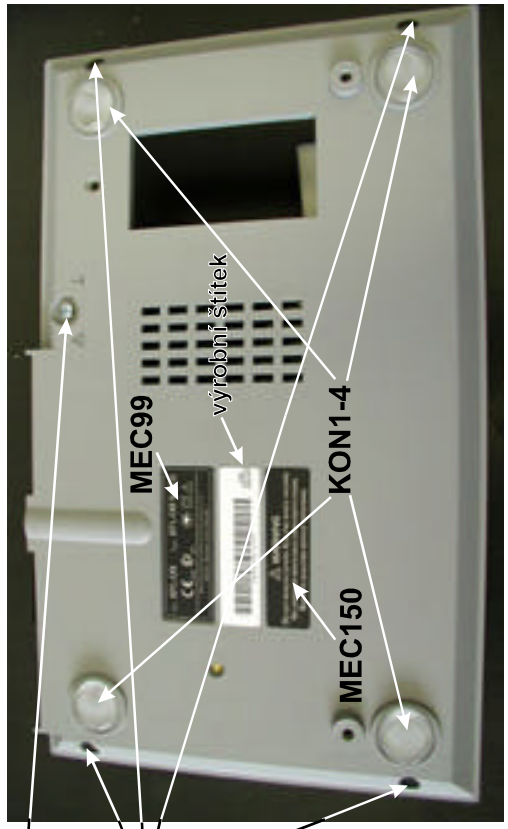
válec s držákem od tiskárny





Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD13/11/2001**	List: Sheet: **7** z of **8**	Číslo výkresu: Sheet number: **071-pri110**	





Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
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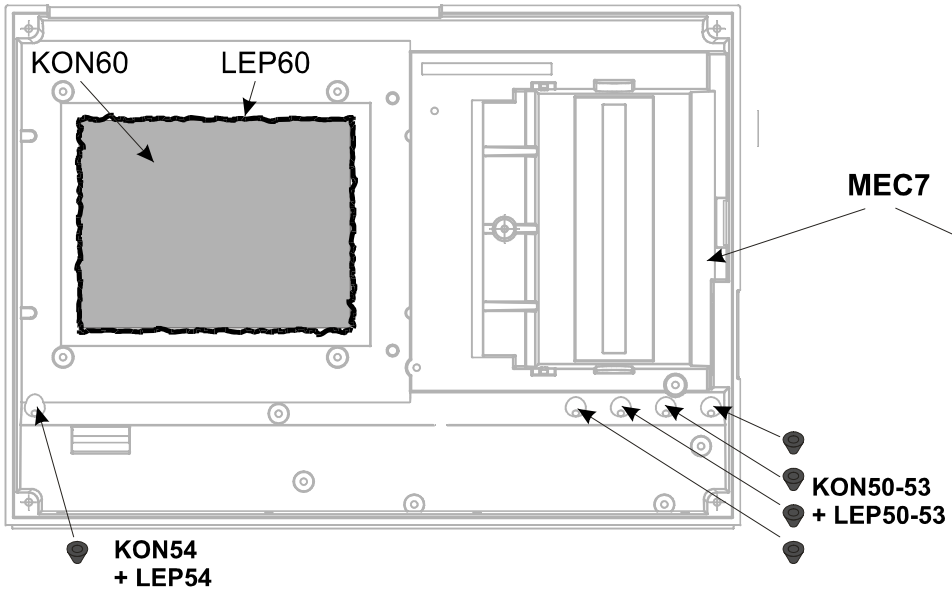
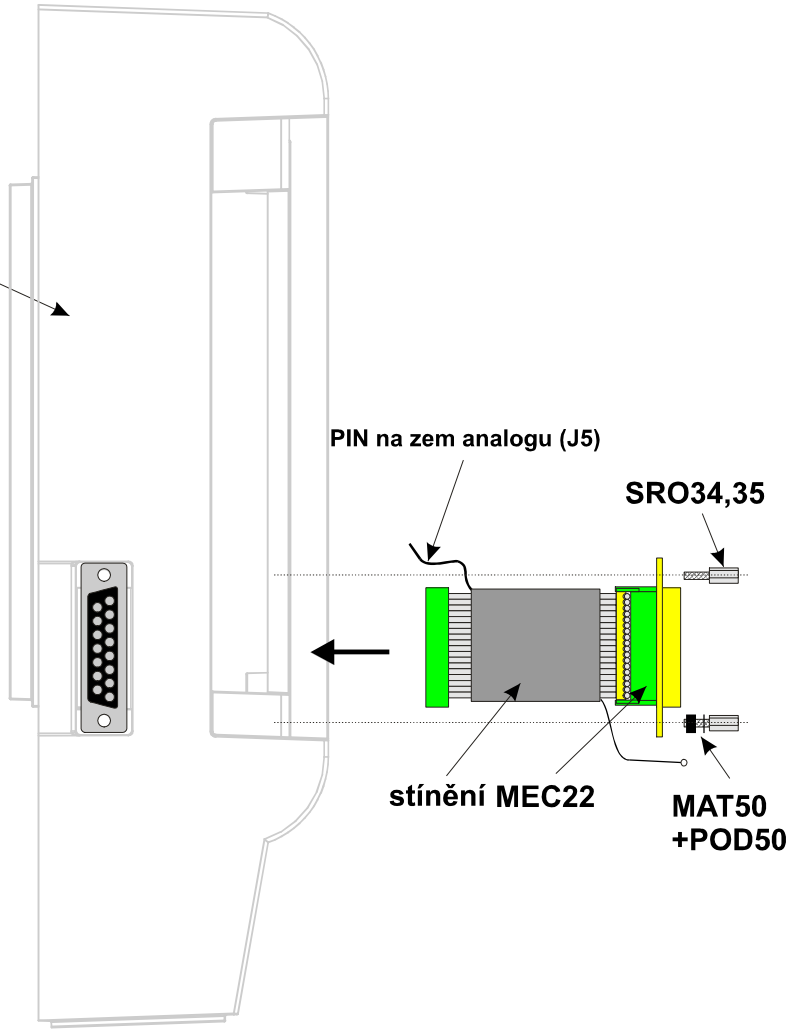
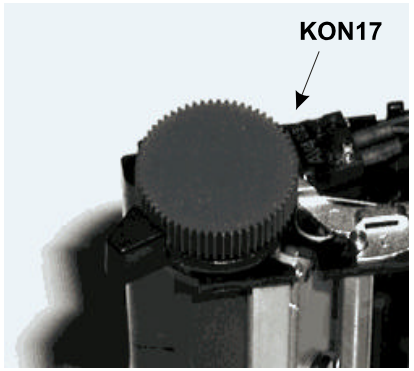
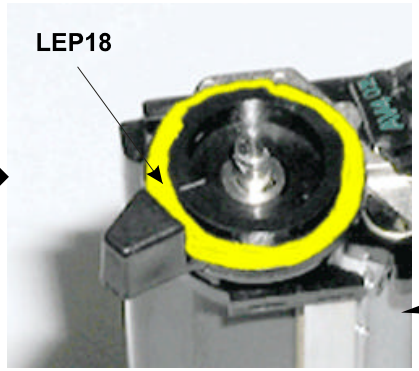
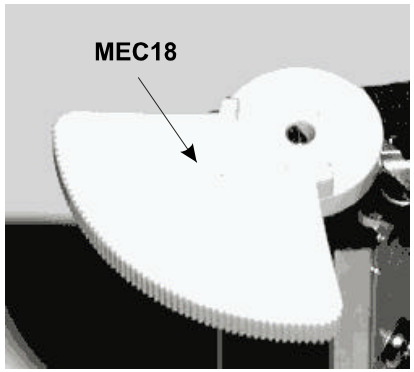




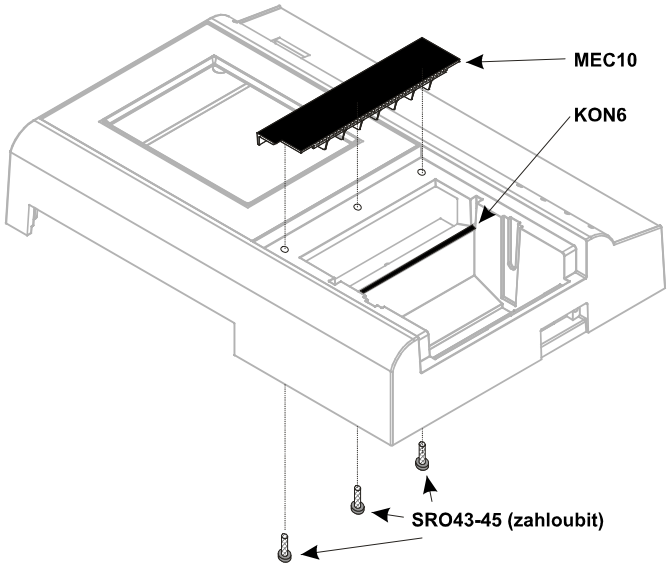


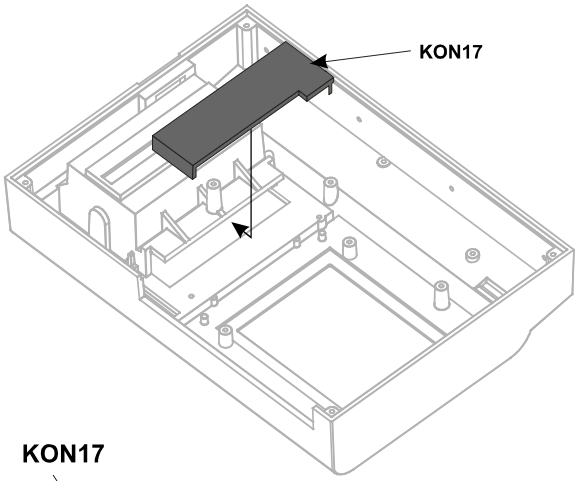


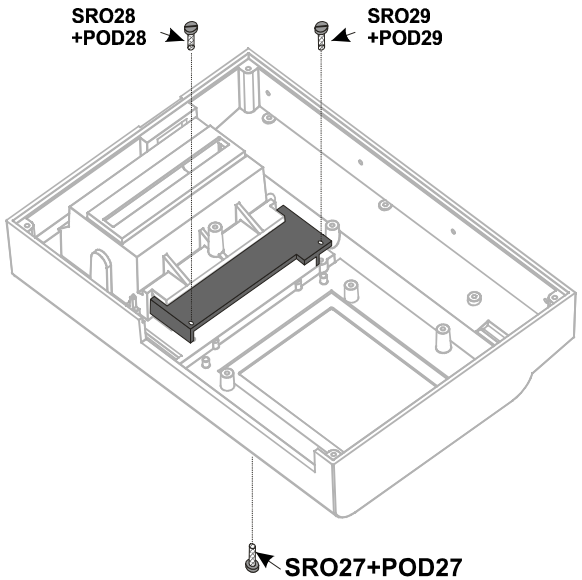


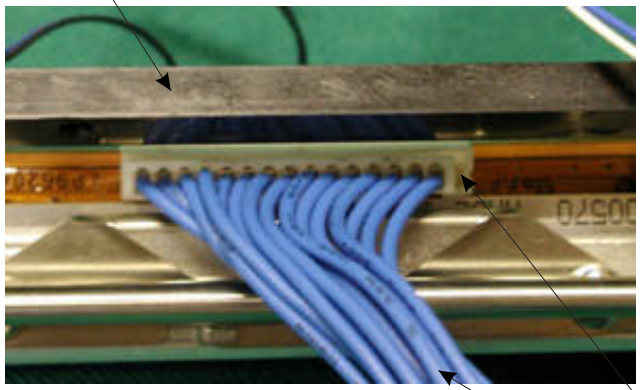
Změna: Change No.:	Popis změny: Change description:	Kreslil: Drawn by:	Konstruoval: Designed by:	Schválil: Approved by:	Pův. verze: Previous ver.:
V2	věcná změna	BJ03/10/2002	AM03/10/2002	TD03/10/2002	101
V1	věcná změna	BJ30/09/2002	AM30/09/2002	TD30/09/2002	100z4

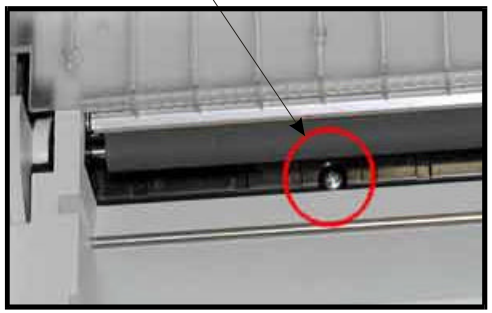
Název výrobku: Product name:	Montáž přístroje			
Medical Technologies	Kreslil: Drown by: BJ13/11/2001	Materiál: Material:		
	Konstr.: Designed by: LP13/11/2001	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: TD13/11/2001	List: 1 z Sheet: 1 of 6	Číslo výkresu: Sheet number: 072-pri110	

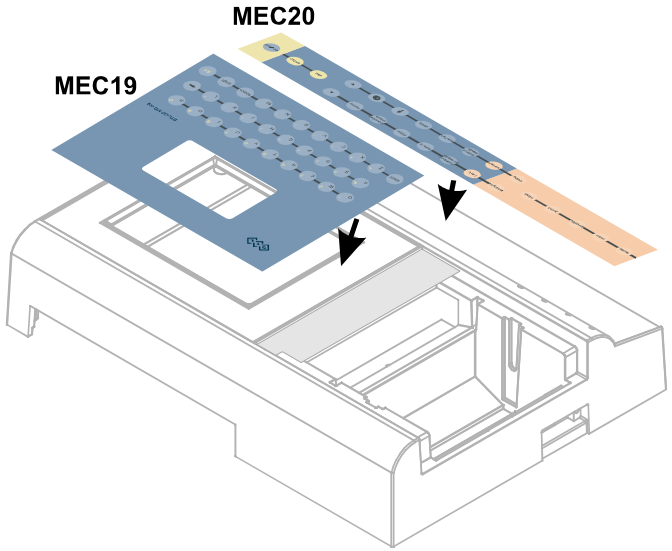


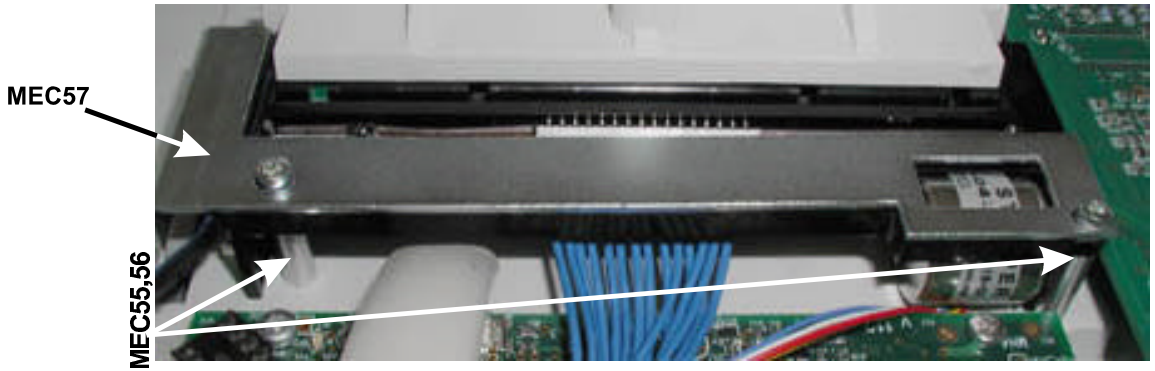












Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
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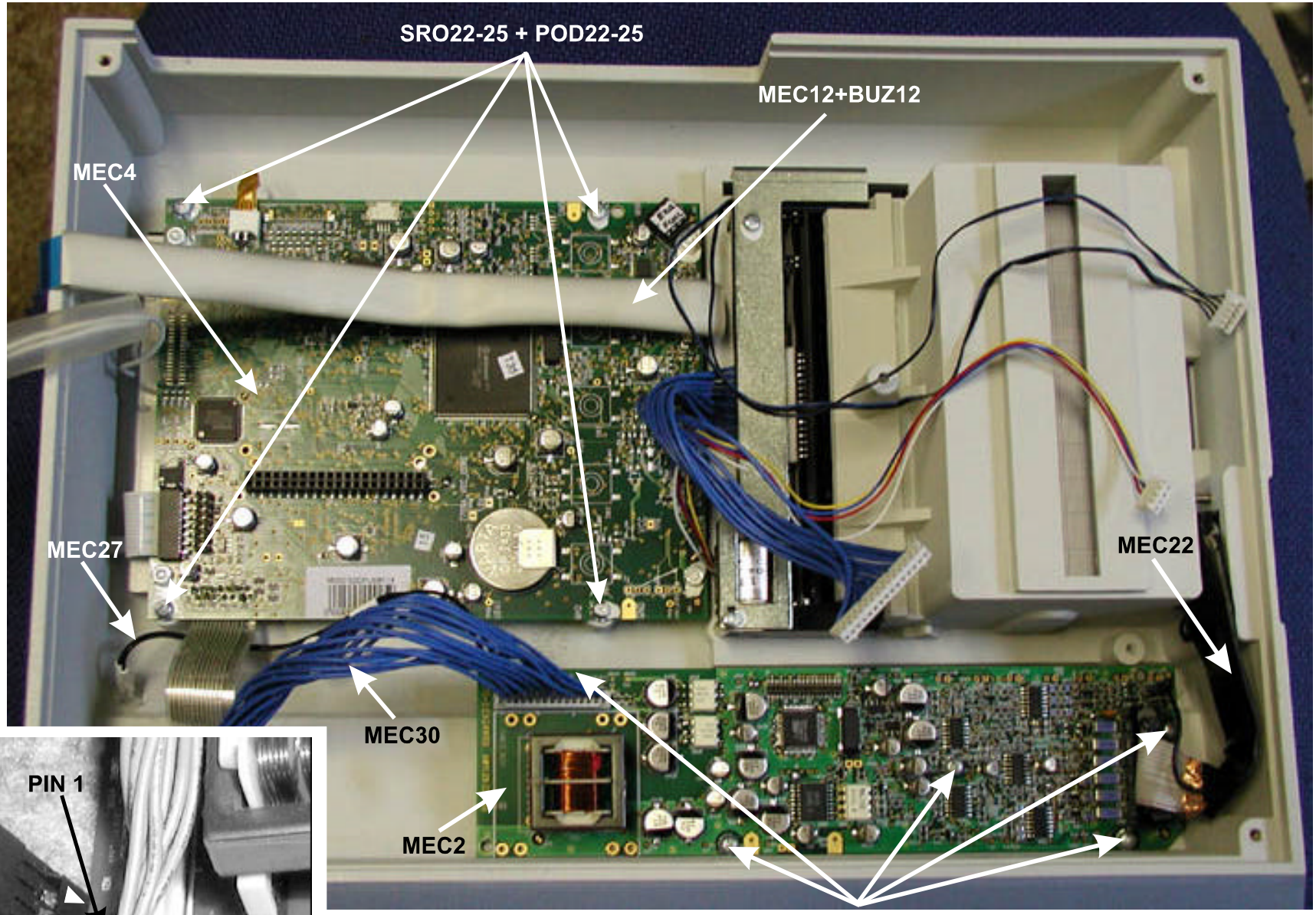
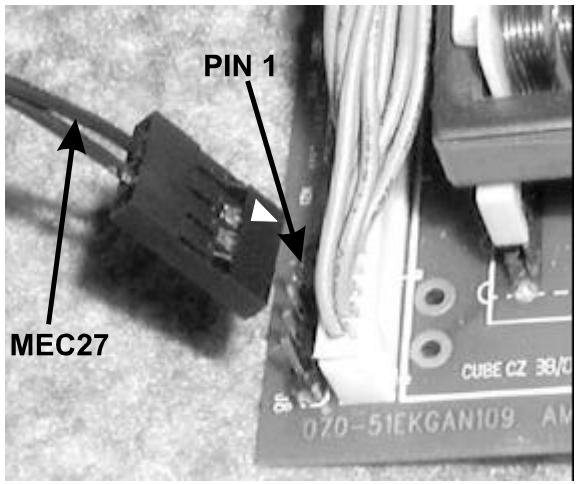
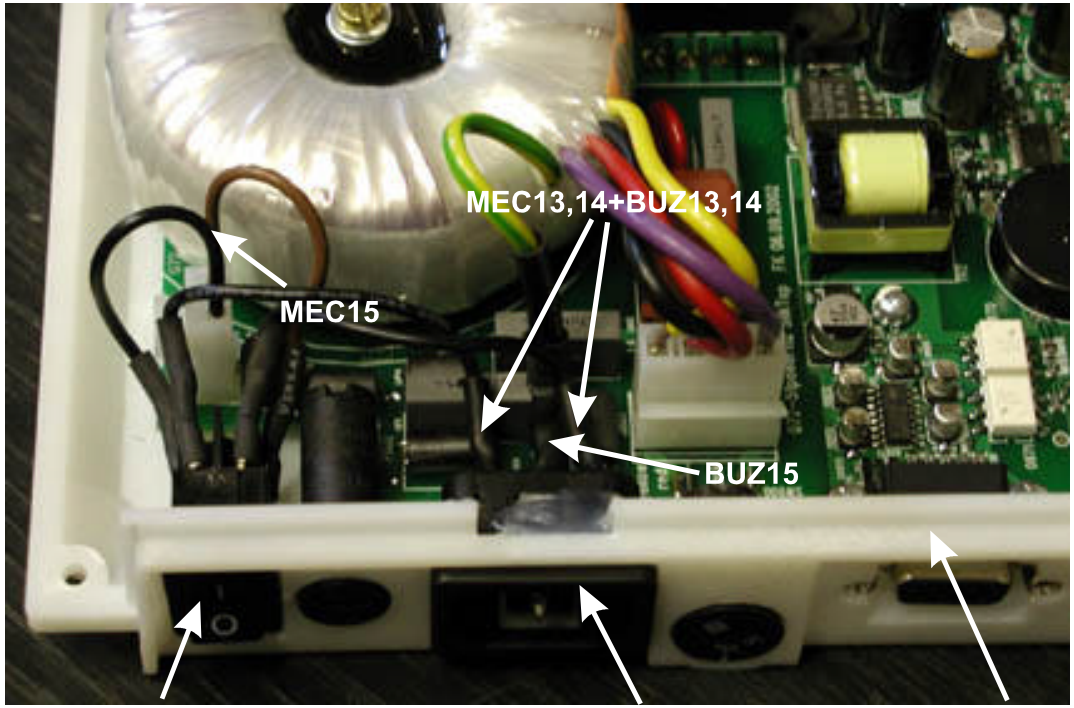
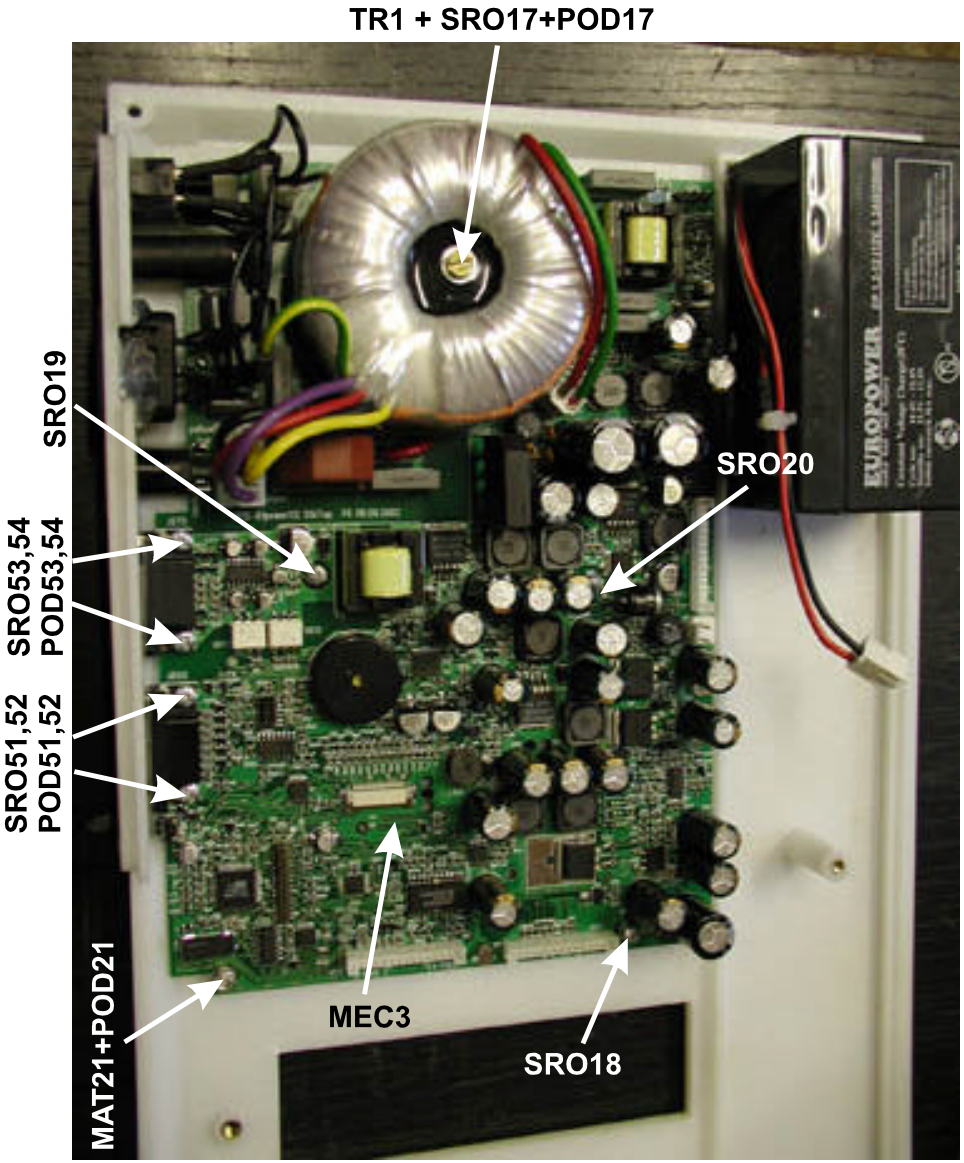


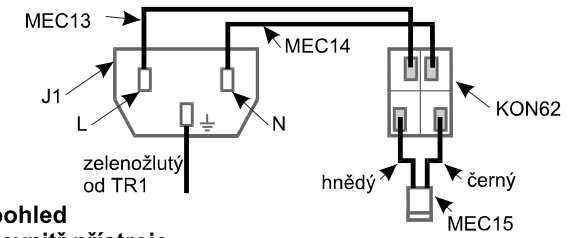


Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
	Konstr.: Designed by: **LP13/11/2001**	Povrch. úprava: Surface finish:		Měřítko: Scale:
	Schválil: Approved by: **TD13/11/2001**	List: **3** z of **6**	Číslo výkresu: Sheet number: **072-pri110**	





Schématické propojení J1 a KON62 - NUTNO DODRŽET



Název výrobku: Product name:	**Montáž přístroje**			
Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
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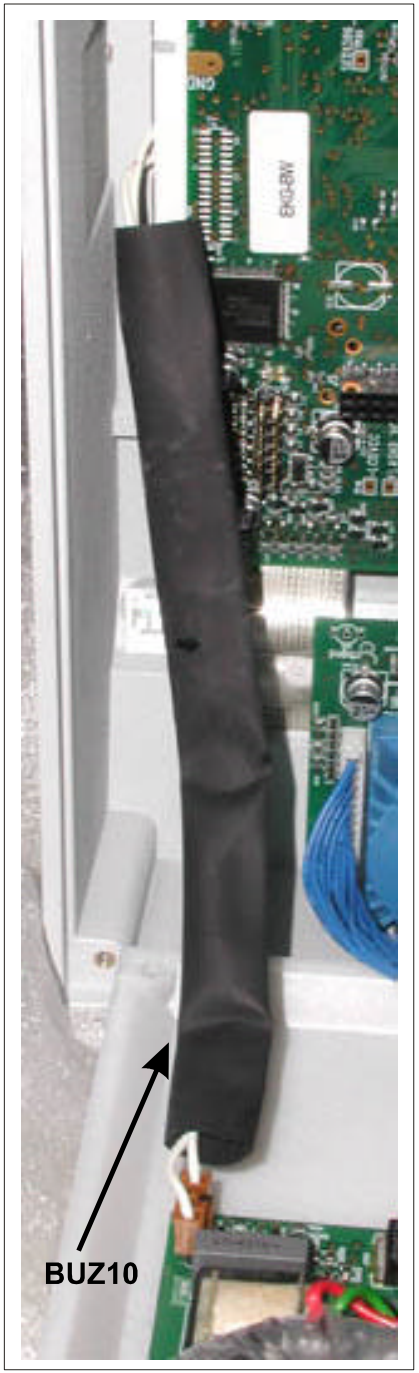

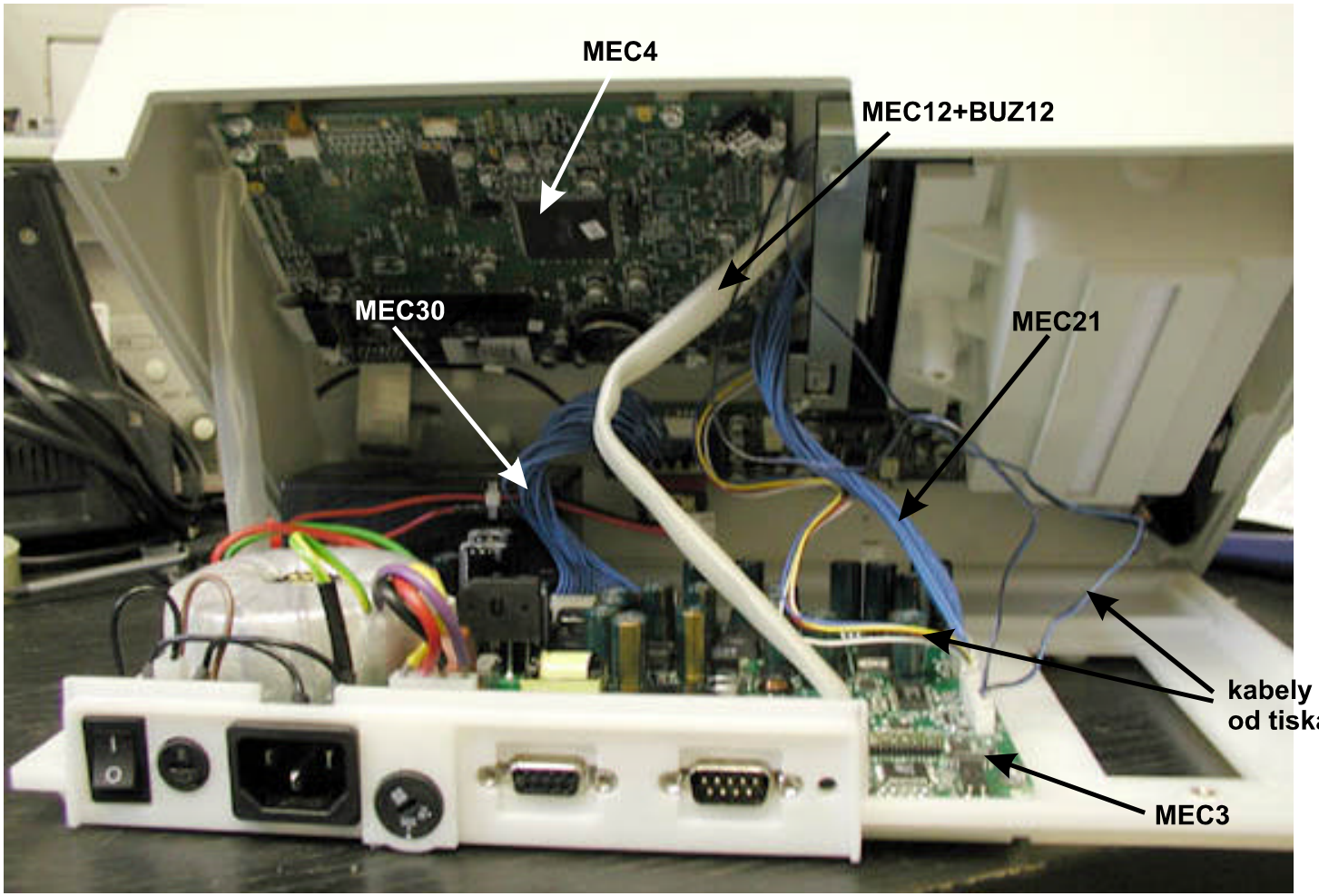

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BTL Medical Technologies	Kreslil: Drown by: **BJ13/11/2001**	Materiál: Material:		
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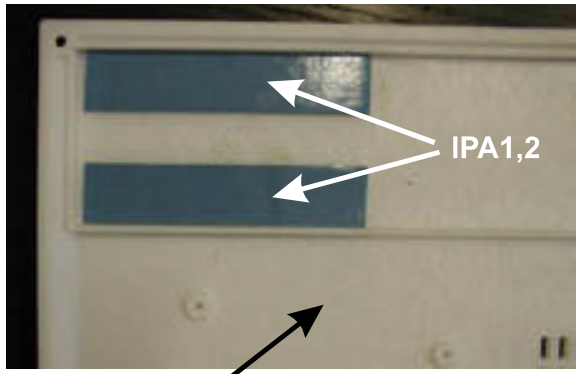

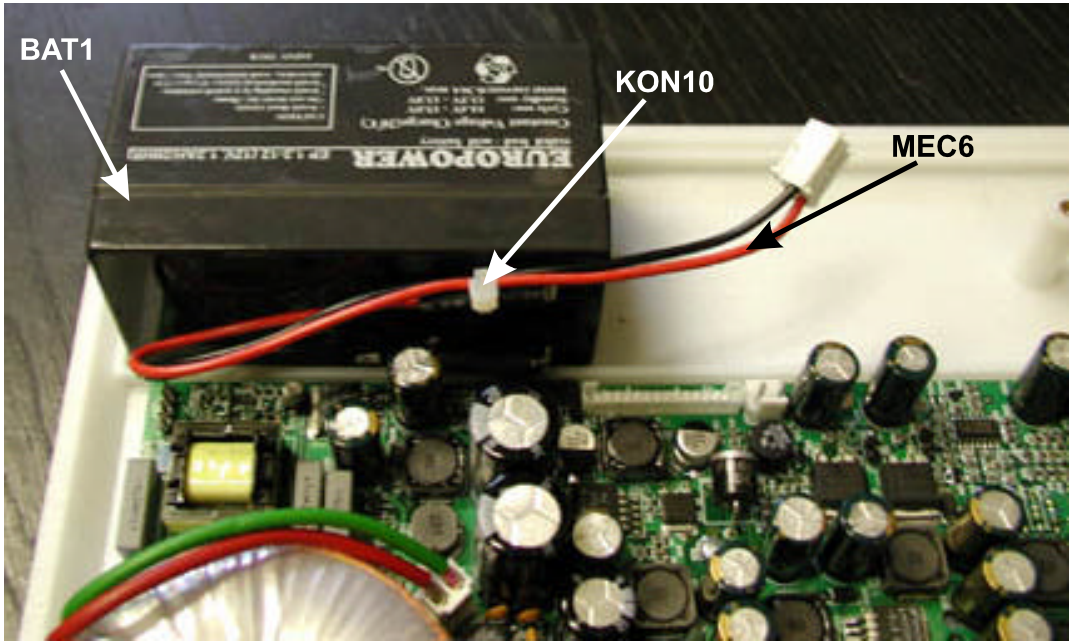

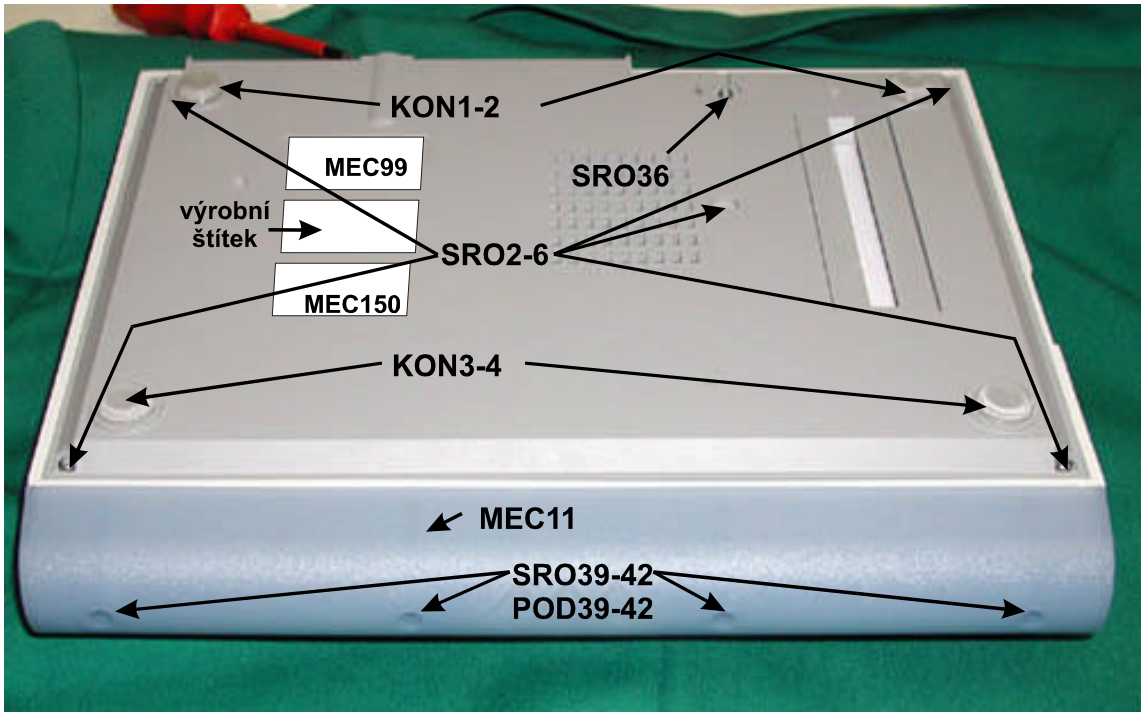

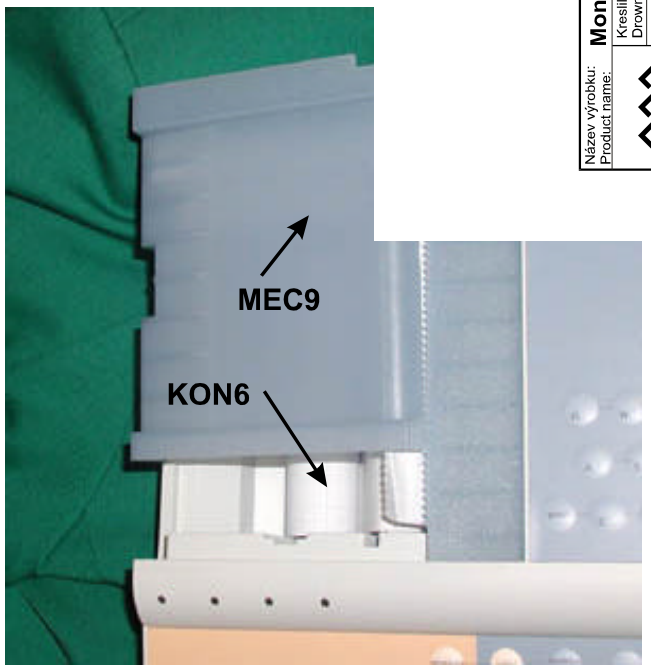

Název výrobku: Product name:	**Montáž přístroje**	Kreslil: Drown by:	**BJ13/11/2001**	Materiál: Material:	
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		Schválil: Approved by:	**TD13/11/2001**	List: **6** z Sheet: **6** of	Číslo výkresu: Sheet number: **072-pri110**

Medical Technologies

Upload of the Application from PC via the Serial Line

The application is loaded into the assembled equipment containing an application or at least the program loader.

1 NEEDED EQUIPMENT AND TOOLS

- program "FirmwareLoader110.exe" - hereinafter "FirmwareLoader.exe"
- serial upload cable
- PC with the operating system

2 UPLOAD PROCESS

2.1

Switch the equipment off by the main switch (rocker switch on the rear panel). Connect the mains cable to the equipment and switch the main switch on.

2.2

Switch the equipment on by longer holding of the ON/OFF button on the front panel. The indicator light under the button should light up and keep shining after releasing the button. After a time (up to approx. 10 seconds) the display should show the opening screen of the respective application. If the equipment does not have a display (types S1 and S3) the LED diodes on the front panel light up. If the equipment contains application of the proper type and version, do not continue. The way of finding out the version of application in the particular ecg type is as follows:
MT - from the initial text on the screen at start: (OS SP2001, **ver XX.XX.XXXX**).
MD, SD - from the initial text on the screen at start: (**ver XXX**).
S1, S3 - can be found out only by the serial line.

If the equipment contains only the program loader the display does not show anything, but the equipment remains in the ON status.

2.3 CONNECTING TO PC

Switch the equipment off, press simultaneously the activation buttons and switch the equipment on again. The display should remain dark and the switching to the upload mode should be announced by a sound signal. The activation buttons for particular types are the following:
MD, MT – AUTO + FILTER
SD – AUTO + MONITOR LEADS
S1, S3 – AUTO + STOP

Connect the upload cable in the connector RS232 on the rear panel of the equipment. The other end of the cable connect in the serial port of the computer.
Start the program "FirmwareLoader.exe". Set the correct communication port ("Settings" tab) and the communication rate. The older types of the equipment communicate by the rate 57600Baud, the later ones by the rate 115200Baud. Press the "Connect" button in the program to connect with the equipment. If everything is OK the program displays the message "Unit: PRESENT" in the bottom bar.
If there appears the message "Unit: CHECKING..“ , the computer cannot connect with the equipment and is seeking for it – it is necessary to find out why, try to repeat connecting with another communication rate, check the cable, etc.

2.4 UNIT HW INFO

Switch over to the "Unit HW Info" tab and press the button with the picture of the equipment in the upper left corner of the window. The bottom bar of the program should display the message "Sending request" and then "Receiving packet". After a while there should appear a table with the listing of hardware configuration of the tested equipment.
On the "Unit HW Info" tab you can see the hardware configuration of the equipment. The key data are especially the version of the loader and the versions of particular printed circuits in the equipment. HW Info can be updated (reloaded from the equipment) at any time by pressing the button in the upper left corner of the tab. For S1 and S3 it is possible to find out the program version from the configuration.

2.5 UPLOADING FIRMWARE

If the information in the HW Info is correct it is possible to upload firmware. Switch over to the "Programming" tab. The equipment must be connected all the time - correct connection is confirmed by the message "Unit: PRESENT" in the bottom bar. If the equipment is not connected, repeat step 2.3.
Press the "Open file" button to select the file with the application which you want to load. The selected file is displayed in the upper light-blue field. The program remembers the last selected setting.
Press the "Compatibility check" button to start the procedure which compares the selected file with the data of the equipment and finds out if the file can be loaded in the equipment, especially as for the hardware compatibility. The result of comparison is listed in a table. The right column of the table contains the comparison result status. If the status is "OK" the respective compared item is OK, if there is "WARNING" there is no fatal conflict but the item is "suspicious". If the status reads "FAIL" the item is not compatible and after loading the file into the equipment there would be a risk of breakdown. In such case do not load firmware and get the correct version of the file.
If everything is OK uncheck the "Check compatibility" checkbox above the "Program" button. The check has already been done manually.
To start uploading of new firmware into the equipment press the "Program" button. During uploading there is displayed the status (on the right) and percentage of completeness (in the bottom status bar).
If loading has passed OK there appears the dialog box "Program OK". Then it is possible to reset and/or disconnect the equipment.

2.6 RESET AND DISCONNECTION OF THE EQUIPMENT

If the work with the equipment is complete it is necessary to disconnect it. There are two possible ways: to simply disconnect PC from the equipment press the "Disconnect" button, to restart the equipment and then disconnect PC from it press the "Reset unit" button.